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# SAN FRANCISCO AIRPORT COMMISSION



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## MINUTES

January 5, 1999  
9:00 A.M.

✈ ROOM 428, WAR MEMORIAL BUILDING  
401 VAN NESS AVENUE  
CITY AND COUNTY OF SAN FRANCISCO

WILLIE L. BROWN, JR., MAYOR

## COMMISSIONERS

HENRY E. BERMAN  
President

LARRY MAZZOLA  
Vice President

MICHAEL S. STRUNSKY

LINDA S. CRAYTON

CARYL ITO

JOHN L. MARTIN  
Airport Director

SAN FRANCISCO INTERNATIONAL AIRPORT  
SAN FRANCISCO, CALIFORNIA 94128



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Minutes  
Airport Commission Meeting  
January 5, 1999

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AIRPORT COMMISSION MEETING MINUTES  
January 5, 1999

A. CALL TO ORDER:

The regular meeting of the Airport Commission was called to order at 9:00 AM in Room 428, War Memorial Building, 401 Van Ness Avenue, San Francisco, CA.

\* \* \*

B. CALL TO ORDER:

Present:	Hon. Henry E. Berman, President
	Hon. Larry Mazzola, Vice President
	Hon. Michael S. Strunsky
	Hon. Linda S. Crayton
	Hon. Caryl Ito

\* \* \*

C. ITEMS INITIATED BY COMMISSIONERS:

There were no items initiated by Commissioners.

\* \* \*

D. ITEMS RELATING TO ADMINISTRATION, OPERATIONS & MAINTENANCE:

Item No. 1 was adopted unanimously at 9:02 AM.

1. Approval of the Initial Setting of the Transportation Fee at \$5.00 Per Transaction for the Consolidated Bus System at the SFO Rental Car Center

No. 99-0001

Mr. John Martin, Airport Director explained that the Rental Car Facility opened on December 30, 1998. The formal opening ceremony will be tomorrow, January 6.

Overall, the operation has been going very well. There are still some clean-up items in the facility, however it will be in good shape for the opening ceremony.

Consistent with previous Commission action, we are now requesting approval of a \$5.00 transaction fee to cover the cost of operating a transportation system between the terminals and the Rental Car Facility. It is consistent with the agreement we struck with the rental car companies. With Senator John Burton's help we obtained State legislation that paved the way for this fee to be imposed.

We have had about a 20% reduction in bus trips on the central roadway system with this new common busing system, dramatically reducing traffic on the outer roadway.





Commissioner Berman asked if this was negotiated?

Mr. Martin responded that it was negotiated with the companies.

The time of adoption of this resolution will be noted on the resolution itself.

\* \* \*

#### E. NEW BUSINESS:

This is the "Public Comment" section of the calendar. Individuals may address the Commission on any topic within the jurisdiction of the Airport Commission for a period of up to three (3) minutes. Please fill out a "Request to Speak" form located on the table inside the entrance to Room 428 and submit it to the Commission Secretary.

Mr. Timothy Treacy, Chairman of the San Francisco Airport Noise Committee, a Committee of the Board of Supervisors, said that Working Paper 2 of the Runway Study gives great emphasis to the noise mitigation benefits that are supposed to be achieved by the conclusions of Working Paper 2. However, the implications for San Francisco residents are quite different.

Working Paper 2 addresses itself to two alternatives which are not very different from the same two alternatives that appeared in the 1990 reconfiguration study.

The result is that in order to achieve noise mitigation for Peninsula cities, the noise impact will be shifted to southern and western San Francisco. The report clearly states that noise will be decreased in the San Mateo areas and will be substantially increased over San Francisco. This information is quantified in the tables. The noise impact will be quadrupled.

This also flies in the face of the Commission's policy against shifting noise to achieve mitigation. The variance under which the Airport operates specifically precludes shifting noise from one community to another. It is also inconsistent with the Roundtable's policy.

In view of these considerations, the Airport Noise Committee requests that the study be discontinued at this time and that Airport staff be directed to consider alternatives that will not result in a noise shift to San Francisco. Only in this way will any reconfiguration be in conformity with State law.

It has been said that a mitigation could potentially be achieved, however, it is not spelled out in any way in a reconfiguration study. He was told that perhaps with some arrangement with the FAA, new routings could be accomplished. But this is not possible under Federal law. It has been their experience with the FAA and the Airport since 1987 that the FAA will not make arrangements where noise considerations are given priority. The Federal mandate is quite different.

Mr. Martin said that because this item is not calendared he won't go into detail, but repeated what has been written in letters to citizens and members of the Board of Supervisors. He recognizes that there could be a noise shift to San Francisco under



alternative runway reconfigurations that are being considered if specific mitigation measures are not measured. He recognizes that we cannot move forward with any runway plan if there is any shift in noise to San Francisco or any other community.

He believes that we can see a significant reduction in noise over San Francisco, but a lot of work will need to be done with the FAA and the airlines. New iron clad procedures will have to be established which would take aircraft further north over the Golden Gate Bridge to avoid the noise shifts referred to by Mr. Treacy.

Commissioner Berman asked if the public will be involved in these considerations.

Mr. Martin responded that we will be meeting with San Francisco residents. His staff is in regular discussion with several residents already. He is trying to schedule a meeting with a group regarding this issue.

The next Working Paper that is released in connection with our feasibility study will address this issue specifically.

Commissioner Berman asked if this will come before the Commission again.

Mr. Martin responded that the Runway Feasibility Report will probably come before the Commission in February. This issue will be addressed as part of that report.

Mr. Dan Liberthson, Secretary of the Miraloma Park Improvement Club, a neighborhood association comprising 200 homes, and member of the Airport Noise Committee, submitted a letter to the Commission (see attached) requesting that the Commission remove from consideration all runway reconfiguration alignments that will shift noise to San Francisco.

\* \* \*

#### I. CORRESPONDENCE:

There was no discussion by the Commission.

\* \* \*

#### J. CLOSED SESSION:

Discussion and vote pursuant to Sunshine Ordinance Section 67.11 on whether to conduct a Closed Session.

The Commission voted unanimously to go into closed session. The Commission recessed its meeting at 9:15 AM and went into closed session.

The Airport Commission will go into closed session in accordance with Government Code Section 54956.9(b)(1) to confer with legal counsel regarding potential litigation.

Discussion and vote pursuant to Brown Act Section 54957.1 and Sunshine Ordinance Section 67.14 on whether to disclose action taken or discussions held in Closed Session.



The Commission reconvened its meeting at 9:28 AM and determined that it was not in the public interest to disclose the nature of the closed session. The vote not to disclose was unanimous.

\* \* \*

K. ADJOURNMENT:

There being no further calendared business before the Commission the meeting adjourned at 9:28 AM.



Jean Caramatti  
Commission Secretary







350 O'Shaughnessy Boulevard • San Francisco, California 94127  
Telephone: (415) 281-0892

## Miraloma Park Improvement Club

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January 4, 1999

Airport Commission  
San Francisco International Airport  
Post Office Box 8097  
San Francisco, CA 94128

Dear Commissioners:

I write to ask that the Airport Commission immediately remove from consideration all runway reconfiguration plans that will shift noise to San Francisco, and refrain from considering any such plans in the future. These plans include the preferred BX and F2 reconfigurations described in the report on the Reconfiguration Study entitled Work in Progress Paper #2, and any other potential reconfiguration that includes lengthening Runway 1. As you are aware, commuter airplane traffic to Southern California currently takes off from Runway 1 and turns left to cross San Bruno Mountain or San Francisco before proceeding south. If runway 1 is lengthened, the heavy, long-haul traffic that now proceeds out "the gap" below San Bruno mountain will be switched to Runway 1, and will then proceed across San Francisco using the same departure path currently used by the commuter planes. The Work in Progress Paper admits that noise will increase over San Francisco from this long-haul traffic, and shows projected increases of 10 to 20 decibels, or two to four times, at all San Francisco monitoring sites. This is intolerable to San Francisco Residents, and illegal given that the Variance under which the Airport operates stipulates no shift of noise from one community to another.

The contention in the Work in Progress Paper that air traffic control procedures can mitigate this shift is completely untenable, as the FAA cannot legally change flight patterns on the basis of noise, but only safety. Even should the FAA commit to change flight patterns so that traffic departing Runway 1 flies up the Bay and out the Golden Gate rather than across San Francisco, the only conceivable mitigation of the proposed noise shift, there would be no way to make that commitment legally binding. In any case, the FAA has always claimed this solution is impossible due to conflicting Oakland Airport traffic, and given the increased volume of air traffic that runway reconfiguration would permit, one would expect such a change to be even more impossible. Thus, by considering runway reconfiguration plans that include lengthening Runway 1, you are putting San Francisco at risk of a massive noise shift and you are proceeding illegally under the Airport's variance and the Airport/Community Roundtable's stated policy. We ask that all such considerations be dropped immediately.

Sincerely yours,

Daniel Liberthson  
Secretary



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# SAN FRANCISCO AIRPORT COMMISSION



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## MINUTES

JANUARY 19, 1999  
9:00 A.M.

ROOM 400 - CITY HALL  
400 VAN NESS AVENUE  
CITY AND COUNTY OF SAN FRANCISCO

WILLIE L. BROWN, JR., MAYOR

## COMMISSIONERS

HENRY E. BERMAN  
President

LARRY MAZZOLA  
Vice President

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JOHN L. MARTIN  
Airport Director

SAN FRANCISCO INTERNATIONAL AIRPORT  
SAN FRANCISCO, CALIFORNIA 94128



Minutes  
Airport Commission Meeting  
January 19, 1999

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# AIRPORT COMMISSION MEETING MINUTES

January 19, 1999

## A. CALL TO ORDER:

The regular meeting of the Airport Commission was called to order at 9:00 AM in Room 400, City Hall, 400 Van Ness Avenue, San Francisco, CA.

\* \* \*

## B. ROLL CALL:

Present: Hon. Henry E. Berman, President  
Hon. Larry Mazzola, Vice President  
Hon. Michael S. Strunsky  
Hon. Linda S. Crayton  
Hon. Caryl Ito

\* \* \*

## C. SPECIAL ITEM:

1. Commendation for the 1998 Recipient for the "William R. O'Brien Perpetual Award for Employee Excellence" to Dan Ravina

No. 99-0002

Mr. John Costas, Acting Airport Director, explained that Mr. Ravina is the Airport's Property Specialist in the Business and Finance division.

This award is given to the employee who has demonstrated outstanding performance, innovation, and service above and beyond the call of duty. Dan is well known as a problem solver in everything that he has undertaken. He is well regarded in all of his ventures working with the airlines in property matters.

Mr. Costas introduced Mr. Ravina to the Commission.

Commissioner Berman congratulated Mr. Ravina on receiving this award and thanked him for his dedicated service.

\* \* \*

## D. DIRECTOR'S REPORTS:

2. Master Plan Quarterly Update

Report on the status of the Master Plan Projects as of December 10, 1998, in accordance with the Baseline Budget and Schedule.



Mr. Tom Kardos, Deputy Director, Bureau of Design and Construction explained that through the 1998 calendar year the Airport awarded \$2.148 billion, or 90% of the program budget excluding contingency and management reserve. In terms of construction only, a total of \$1.715 billion or 90% of the budget has been awarded through the reporting period. New construction contract awards during the last quarter totaled \$12.4 million. Total contract awards during this quarter amounted to \$94 million including contract modifications in both construction and professional services.

Over the next six months we anticipate awarding approximately \$41 million in construction contracts. The total awarded percentages will reach 93% of the program budget, or 92% of the construction budget only.

Invoices approved since the last report totaled \$191 million, bringing the totaled invoiced amount to \$1.515 billion or 58% of the total current budget.

Contingency usage to date is \$102 million, or 70% of the \$147 million budget compared to a completion level of 62% based on approved invoices. The current management reserve budget is \$108 million, a \$7 million decrease from the previous report primarily due to schedule mitigation costs associated with the International Terminal and North Connector building contracts and the settlement of the change order associated with the BART link building. The current forecast for the Management Reserve budget at completion is \$88 million, a \$2 million increase from the previous report. The difference is due to the balance of \$15 million in forecast cost growth being offset by savings in environmental mitigation costs of \$16 million.

The total program reached 63% completion, with 86% design completion and 62% construction completion.

The International Terminal building is 70% complete. We continue to accelerate work activities to enclose the building in order to minimize weather impact on architectural finishing work. Boarding Areas A (77% complete) and G (85% complete) are proceeding on schedule for a 4th quarter 1999 and 3rd quarter 1999 respective completion

Both the Elevated Circulation Roadways and the Inbound/Outbound Ramps Projects require selective acceleration to maintain the original schedule.

The AirTrain Operating System Supply Contract is in its design phase. Full passenger service remains scheduled for December 15, 2001. The guideway for the AirTrain System is about 50% complete.

The three Securities and Special Systems contracts began cable pulling in December and continued installation of equipment in the International Terminal Complex.

In the area of job safety, our actual rate of 10.13 for recordable incidents is slightly higher than the national average and shows an increase over our last report. Our lost time incident rate of 2.91 is slightly above our goal of 2.45, which is half of the





national average, and represents a marginal improvement over the third quarter of 1998.

The MBE/WBE participation is 23%/5% respectively on the program level. A breakdown by the major sub-areas is presented in the report.

In summary, the Master Plan Implementation Program is proceeding on the basis of selective work acceleration to meet the scheduled completion date while remaining within the baseline budget.

Commissioner Strunsky commented that this is a well thought out report. The 55% to 60% completion rate commits us to being on schedule for the planned opening, and on budget. As we progress, there should be fewer and fewer surprises, so each one of these reports indicating an on-time and on-budget performance makes it more and more important that the consultants are informing Mr. Kardos of potential problems.

Mr. Kardos said that there is some exposure to contracts in two areas ... as we approach completion of the tenants, the Airport divisions are becoming more and more familiar with the building, there are functional requirements that are coming up over which we have to maintain control.

The other area of concern, that is resulting in a very thorough analysis, is the systems, the brains of the building. They are approaching a 20% to 25% completion level. The integration of those systems has been delayed six months due to the procurement. The integration of those systems into the building is creating some financial and time exposure. We intend to finalize the evaluation of the exposure and provide the Commission with the conclusions.

Commissioner Strunsky said that this report includes certain acceleration programs in place ... Saturday work for certain carpenters, iron workers ... he wants to make sure that we don't lose track of the fact that we may need acceleration on the engineering and planning side.

Mr. Kardos responded that our planning and organization focus is on the commissioning of the building. We are putting the program together and establishing the line of authority. The contractors are being brought in as part of the team and establishing the commissioning schedule, availability of areas in the complex, etc.

Commissioner Strunsky noted that the report indicates that the terminal will open in May, 2000. It looks as if we will be very close to the budget. The staff is to be commended for that, but reminded that they have to make it happen.

Commissioner Berman asked Mr. Kardos asked if he is comfortable with the \$108 million reserve?

Mr. Kardos responded that he is never comfortable. Is it realistic to assume that we will be within budget? Yes, it is. Is he comfortable with it? No.



Commissioner Crayton said the schedule notes critical activities in each area. Some of them appear to be going past the May 2000 date, in particular the passenger boarding bridges and the Boarding Area A apron.

Mr. Kardos explained that the beginning of the report noted milestone dates. The May 2000 opening occurs in the International Terminal with 17 of the 24 gate positions. Successive openings of gate positions are being scheduled, and that impacts the passenger loading bridges and Boarding Area A apron.

The last three gates on Boarding Area A are going to be open in December 2001 in order to minimize the relocation of airlines to only one relocation. This was an agreement between our operating departments and selective airlines. Originally, the full 24 gates were scheduled to open June 2001. We postponed it to December 2001 to minimize relocation of airlines and the associated costs.

Commissioner Ito asked for an update regarding improvement in the accident rate.

Mr. Kardos responded that in the last three months the reportable incidents and lost time incidents has gone steadily down. The present quarterly report is the cumulative effect from December 1998 which reflects the two major incidents we had and the potential cost exposure to those accidents.

All Project Managers are required to read the safety walks as well as the safety programs.

\* \* \*

### 3. Master Plan Construction Traffic Operations - Six Month Report

Summary of the traffic operations changes in the past six months and the next six months.

Mr. Edwin Leung, Assistant Deputy Director, Landside Operations updated the Commission on traffic operations. He explained that he would make his presentation in three segments: (1) Freeway and Airport roadway changes in the last 6 months; (2) Parking update of the last 6 months and the next 6 months; and, (3) Freeway and Airport road changes in the next 6 months.

(1) Freeway and Airport road changes in the last 6 months: A new Airport off-ramp was built July 1998 from southbound Highway 101. The off-ramp has been relocated northerly to I-380/N. A new San Bruno on-ramp was constructed in November 1998 to southbound Highway 101. The ramp has been moved northerly and weaves left to slip ramp. McDonnell Road was widened and signals improved by December 30, 1998 for the new Rental Car Center (RAC). Three new traffic signals, signs and road widening to four lanes and four lanes on the northbound approach at the San Bruno Avenue intersection completed. McDonnell Road was realigned at Roads R-6 and R-18 for the ART Guideway. The Connector roads R-20 and R-24 were realigned for Elevated Circulation Roads in the summer of 1998.

New Rental Car Center and its operations: The new Rental Car Center opened on



December 30, 1998 for all on-Airport Rental Car companies. A consolidated shuttle bus service started on December 30 and serves all rental car customers, operating between the Airport terminals and the RAC via Highway 101. All off-Airport rental car shuttle buses are required to pick-up and drop-off customers at the RAC. New highway signs were installed to guide rental car customers to the RAC from Highway 101 southbound to the North Access Road, and northbound to San Bruno Avenue. New road signs were installed to guide customers from the RAC to Highway 101 northbound via San Bruno Avenue, and southbound via the North Access Road. A new southbound Highway 101 off-ramp to San Bruno Avenue will open in June, 1999.

Commissioner Ito said that friends of hers arrived last week and found signage from the RAC facility to the highway to be inadequate.

Further, it is unclear that the shuttle for the RAC facility is common use. That needs to be clear.

Mr. Costas said that information was distributed directly, as well as through the rental car companies regarding consolidation of the bus system. However, we may need to embark on a second campaign.

Commissioner Strunsky thought that a survey of passengers using the RAC facility should be conducted.

Mr. Costas agreed that a survey was a good idea.

Commissioner Ito also said that luggage carts at the RAC facility would also be helpful to passenger in getting to their vehicles.

Mr. Costas responded that the Director indicated that he would like to evaluate the benefits of utilizing a skycap service for rental car customers at the RAC facility. Staff will look into and report back to the Commission.

Commissioner Crayton said that Airport employees need to be able to provide information regarding the rental car facility. Perhaps written information could be given to passengers

Mr. Leung said that staff was looking at the issue of signage. There are also coordinators at the curbs and center island who are ready to answer questions and direct passengers to the shuttle bus.

(2) Parking Updates: Currently, we have about 5,200 parking spaces in Long Term Lot D. For the construction of Taxiway Q, starting this week, we will lose 400 spaces, bringing the number of spaces down to 4,800 spaces. In May of this year we will add 280 spaces at a Detention Basin. This compares to 4,700 spaces last summer, and 3,400 spaces before the Master Plan. An additional 2,000 spaces in Parking Lot DD are being planned for this summer.

(3) Freeway and Airport road changes in the next 6 months: There are five construction projects that will effect the Airport main road in the next 6 months.



These projects will be coordinated with the construction managers in order to avoid any overlapping impact on the main road in and out of the Airport terminals. The five projects are the (1) AirTrain East Loop - installation of long span girders will start in February. During this period the Upper Departure Level at the South Terminal will be channeled to one lane to the inner road and one lane to the outer road. Full Upper Level closure will occur between 1:00 AM and 5:00 AM. Traffic will be diverted to the Lower Level Lane No. 3. The Lower Level closure of Lanes 1 and 2 will continue for AirTrain construction. Lane Nos. 3 and 4 will be open at all three terminals. (2) Repair of the Upper Departure Level Viaduct will start in April 1999 with 1-six month phase. There will be single lane closure on the Upper Level from 11:00 PM to 5:00 AM, and on the Lower Level from 11:00 PM to 10:00 AM. (3) Installation of Utilities underneath the new International Terminal will start in February for 4-ten week phases. The vertical clearance will be reduced to 12' 6" at the Upper Level approach. Over height buses and trucks will be diverted to the Lower Level. Warning devices and signs will be installed. Throughout this period, a 15 ft. vertical clearance will be maintained either at the Upper or Lower Level. (4) Vehicular Bridge for the International Parking Garage over the Main Road R-1 will start in April for 2-one week phases. Inbound and outbound freeway ramps of the Main Road R-1 will be closed from midnight to 6:00 AM. Traffic will be diverted to the Millbrae Avenue ramp and Road R-2. (5) Placement of utilities, curbs and gutters on R-1 beneath the new International Terminal will start later this month for 6-one month phases. There will be single lane closures midnight to 6:00 AM either Upper or Lower Level Lanes.

(3) Frontage Road Construction Impacts 1999: R-2 and McDonnell Road are currently realigned for AirTrain falsework for 2-two night phases. R-2 will be realigned for the new Millbrae on-ramp in February for a 1-two month phase.

Commissioner Strunsky said that this is an amazingly complicated and large project and Landside's efforts to date have been great. In the midst of this \$2.5 billion program, there have been no major complaints about how we have operated. He congratulated Mr. Leung for his efforts.

\* \* \*

#### E. ITEMS INITIATED BY COMMISSIONERS:

There were no items initiated by Commissioners.

\* \* \*

#### F. ITEMS RELATING TO ADMINISTRATION, OPERATIONS & MAINTENANCE:

##### 4. Award of New Contract for the Caltrain-SFO Shuttle

No. 99-0003

Resolution awarding the new Caltrain-SFO Shuttle contract to Airline Coach Services, Inc., commencing April 1, 1999 at a budget not to exceed \$600,000





Ms. Alice Sgourakis, Landside Operations explained that in October 1998 the Commission authorized staff to seek proposals for a new four year contract to operate the CalTrain-SFO Shuttle. The contract will run from April 1, 1999 through March 1, 2003.

The RFP requires the contractor to operate comfortable, 100% compressed natural gas (CNG) vehicles. The incremental cost of purchasing these vehicles has been awarded through a grant from the Air District to the Airport.

The six proposals received were evaluated on the basis of qualifications and experience, technical content and cost. Based on that review, three firms were interviewed. As a result of that process, staff recommends that the contract be awarded to Airline Coach Service. This firm was the most responsive to the RFP, had strong qualifications and experience, will provide the service at the lowest cost, has a good understanding of customer service needs and the Airport's ground transportation operations.

Airline Coach Service is an MBE based in Burlingame.

Prior to issuing the RFP, staff submitted an estimated annual budget for this service of \$600,000 based on the current contractor's cost of \$290,000, or \$45 per service hour for the six months ending March 31, 1999.

Airline Coach Service proposes to operate the existing route for the first year at an annual cost of \$477,533, or about \$38.20 per service hour.

At present the shuttle group serves the Millbrae CalTrain Station indirectly by first going north to serve United's MOC and then getting on 101 southbound to get back to the Millbrae CalTrain Station. To alleviate this problem, while still serving the MOC users, for the 1999/2000 year, staff is considering revising the route so that customers that get on at the terminal can go directly to the CalTrain Station. We would add a second route that would serve the MOC users and get them to the San Bruno CalTrain Station, which is closer to that location.

The service improvement will eliminate out of direction travel and a portion of the 101 route that gets heavily congested. This will significantly improve the service for terminal users as well as the MOC users.

The low cost per service hour offered by Airline Coach Service will allow this improvement in service while remaining within the \$600,000 annual budget estimate.

Commissioner Crayton asked where the other firms who submitted RFPs were located.

Ms. Sgourakis responded that SFO Airporter is based in San Francisco and MD Transportation is based in Fairfield.

Commissioner Strunsky said that the numbers indicating usage is impressive. He asked if the \$600,000 was an annual cost.



Ms. Sgourakis responded that it is.

Commissioner Strunsky noted that the annual figure averages out to \$3.00 per passenger. He was very pleased and hoped that ridership would continue to grow.

5. Modification No. 3 to the AirTrain Road and Lot D Stations Professional Services Agreement, Contract No. 5709.1 - Murokami Associates - \$300,000

No. 99-0004

Resolution approving an increase to basic professional services fees in the amount of \$300,000 to provide As-Needed Plan Checking Services. Funding for the services will be provided by the Airport's Capital Improvement Program (CIP) Budget, with no impact on the Master Plan Baseline Budget.

Mr. Kardos responded that this contract was awarded to Murokami and Associates in 1996 in the amount of \$330,000. The scope covered the design of the two AirTrain Stations. During the design period the contract was modified.

This modification, in the amount of \$300,000, will provide as-needed plan checking services, assisting our building inspection and code enforcement.

With the International Terminal approaching completion, tenant improvement work will increase dramatically. The architect will provide as-needed services as called upon by the Airport. The original MBE participation of 20.3% and 7.7% respectively will remain unchanged.

Commissioner Strunsky asked if this was in the latest Master Plan cost forecast.

Mr. Kardos responded that the funding sources are Capital Improvement Program Funds, not Master Plan funds.

\* \* \*

G. CONSENT CALENDAR OF ROUTINE ADMINISTRATIVE MATTERS:

Item Nos. 6 through 15 were adopted unanimously.

6. Retirement Resolution - Steve Hung

No. 99-0005

7. Authorization to Solicit Proposals for Financial Advisory Services in Connection with the General Airport Revenue Financing Program

No. 99-0006



8. Authorization to Solicit Proposals for Underwriters in Connection with the Commercial Paper Program

No. 99-0007

9. Bid Call - Contract No. 3606K - On-Call Environmental Remediation Phase III: Removal and Disposal of Contaminated Soil, Sludge, and Water and Other Related Environmental Work

No. 99-0008

Resolution approving the final plans and specifications and authorizing the Director to call for bids when ready for Bid Call - Contract No. 3606K, On-Call Environmental remediation Phase III: Removal and Disposal of Contaminated Soil, Sludge, and Water and Other Related Environmental Work.

10. Modification No. 4 to Contract No. 5510 - New Boarding Area A, Professional Services Agreement with Gerson/Overstreet, Architects

No. 99-0009

Resolution approving an increase to additional professional services fees in the amount of \$300,000 for full architectural and engineering services to provide As-Needed Plan Checking Services to FOM's Building Inspection and Code Enforcement Section.

11. Security Identification Display Area Training Video

No. 99-0010

This item requests that the Director be authorized to issue a Request for Proposals for the production of a new Security Identification Display Area Training Video.

Mr. Larry Horn, Manager, License and Permit Bureau explained that the budget for this RFP is \$70,000.

Commissioner Strunsky said that we can't be a lone airport issuing badges. Can we get together with another airport to produce a video?

Mr. Horn responded that other airports produce videos for SITA training. However, we are looking at modular type videos so that as changes occur throughout the Airport, whether it be changes in reconfigurations or FAA rules and regulations, those sections can be removed and replaced.

12. Sole-Source Contract with RIDES for Bay Area Commuters



No. 99-0011

Resolution authorizing a Sole-Source Contract with RIDES for Bay Area Commuters to staff the Airport's Ground Transportation Hotline and provide other services related to transportation demand management.

13. Modification No. 2 to the Professional Services Contract with Psomas and Associates - \$15,000.

No. 99-0012

Resolution authorizing a modification to the Professional Services Contract with Psomas and Associates to increase the contract amount in order to continue providing a system to monitor land use compatibility with aircraft noise around the Airport to ensure compliance with State of California Aircraft Noise Standards, Title 21. \$15,000.

Commissioner Strunsky asked what was meant by the term "Land Use Compatibility?"

Mr. Costas responded that it is a term that has been used over the past 25 years which refers to the compatibility of airport land use with surrounding land uses. It is primarily used when we talk about aircraft noise. Under State law, land use compatibility determines if land use of areas surrounding an airport is compatible with the operations of an airport, particularly as it relates to airport noise.

14. Modification No. 2 - Polaris Research and Development, Inc. - Passenger Survey Management Services

No. 99-0013

Resolution authorizing the Airport Director to exercise the final extension option contained in the Airport Commission's Professional Services Contract with Polaris Research and Development, Inc. for Passenger Survey Management Services.

15. Airport Improvement Program Project No. 3-06-0221-99-01 Project Application

No. 99-0014

Resolution requesting the Mayor to recommend to the Board of Supervisors a resolution granting the Airport Commission authorization to execute and file a Project Application with the Federal Aviation Administration for Federal assistance.

\* \* \*





H. NEW BUSINESS:

This is the "Public Comment" section of the calendar. Individuals may address the Commission on any topic within the jurisdiction of the Airport Commission for a period of up to three (3) minutes. Please fill out a "Request to Speak" form located on the table inside the entrance to Room 428 and submit it to the Commission Secretary.

There were no requests from the public to speak.

\* \* \*

I. CORRESPONDENCE:

There was no discussion by the Commission.

\* \* \*

J. CLOSED SESSION:

Discussion and vote pursuant to Sunshine Ordinance Section 67.11 on whether to conduct a Closed Session.

The Airport Commission will go into closed session in accordance with Government Code Section 54956.9(b)(1) regarding potential litigation.

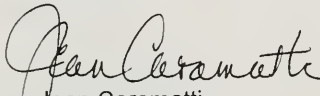
Discussion and vote pursuant to Brown Act Section 54957.1 and Sunshine Ordinance Section 67.14 on whether to disclose action taken or discussions held in Closed Session.

The Commission did not go into closed session.

\* \* \*

K. ADJOURNMENT:

There being no further calendared business before the Commission, the meeting adjourned at 9:50 AM.

  
Jean Caramatti  
Commission Secretary



5  
2/99

# SAN FRANCISCO AIRPORT COMMISSION



## MINUTES

February 2, 1999  
9:00 A.M.

✈ ROOM 400 - CITY HALL  
400 VAN NESS AVENUE  
CITY AND COUNTY OF SAN FRANCISCO

WILLIE L. BROWN, JR., MAYOR

## COMMISSIONERS

HENRY E. BERMAN  
President

LARRY MAZZOLA  
Vice President

MICHAEL S. STRUNSKY

LINDA S. CRAYTON

CARYL ITO

JOHN L. MARTIN  
Airport Director

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Airport Commission Meeting Minutes  
February 2, 1999

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AIRPORT COMMISSION MEETING MINUTES  
February 2, 1999

A. CALL TO ORDER:

The regular meeting of the Airport Commission was called to order at 9:00 AM in Room 400, City Hall, 400 Van Ness Avenue, San Francisco, CA.

\* \* \*

B. ROLL CALL:

Present:	Hon. Henry E. Berman, President
	Hon. Larry Mazzola, Vice President
	Hon. Michael S. Strunsky
	Hon. Linda S. Crayton
	Hon. Caryl Ito

\* \* \*

C. ADOPTION OF MINUTES:

The minutes of the regular meetings of December 1, 1998, December 15, 1998, and, January 5, 1999 were adopted unanimously.

No. 99-0015

\* \* \*

D. DIRECTOR'S REPORTS:

1. Report on the Runway Reconfiguration Feasibility Study - Oral Report

Mr. John Costas, Chief of Staff, explained that the purpose of the last stakeholder meeting was for the Airport consultants to present findings on Working Paper 3, the last working paper on the feasibility study, present findings on the regional planning analysis, solicit comments and respond to questions from the stakeholders.

Working Paper 2 narrowed down a series of alternatives on runway reconfiguration to two ... F2 and BX. Working Paper 3 provided further detailed analysis of these alternatives, meeting the objectives of delay reduction, noise reduction, and accommodating new large aircraft.

There were two components to this runway reconfiguration program ... a physical component, how the runways are laid out, and an operational component, how they operate.

Working Paper 3 also provided a feasibility analysis from the point of environmental mitigation, constructability and cost.



In satisfying the objectives, both of these alternatives virtually eliminate the two to three hour delays we are currently experiencing during poor weather conditions. The average annual operation delay of 15 minutes for every operation will be reduced to something less than two minutes.

There is significant noise reduction to the surrounding communities. The FAA indicates that a one and a half reduction (CNEL) is significant. In the San Bruno gap, which includes So. San Francisco and Daly City, up to a 6 db reduction will be achieved, four times the significance of the FAA.

In the backblast areas of Millbrae and Burlingame, there will be a reduction of 4 to 5 decibels on the CNEL range. For the South Peninsula, which includes Palo Alto, Atherton, etc., which are affected by aircraft landings, the reduction will be anywhere between 0 and 1 db. In San Francisco and Oakland, which are affected by departing aircraft, the noise reduction could be up to 1 db reduction. That is still being analyzed. In all cases, there will be no shift in aircraft noise.

In terms of findings of the new large aircraft, both of these alternatives will fully accommodate the proposed new large aircraft, both on the airfield, as well as full access to all of our gates, primarily our International gates by expanding the taxiway A/B system which serves those gates.

Cost of construction is about \$1.5 billion for both alternatives. The total cost is about \$4.4 billion.

These alternatives will require filling in about 1,000 to 1,100 acres of the Bay. The feasibility analysis has identified about 25,000 acres of environmental mitigation site wetlands in the North and South Bay that would be more than adequate to mitigate this project. It won't just simply mitigate, but would also provide environmental responsibility.

The consultants have determined that the best construction method is fill in, but there will be some pile foundation structure for environmental considerations.

The FAA criteria for eligibility of Federal funds requires a cost benefit. The minimum criteria ratio is 1 for benefit cost. The findings on both alternatives are 2.2.

The project is financially feasible with a combination of Federal grants, passenger facility charges and general revenue bonds.

The Regional Planning analysis also undertaken and the findings on that are two categories ... Regional Airport Capacity of all three airports in the Bay Area, and alternatives to the runway configuration.

On the Regional Airport Capacity, of the three forecast ranges, all three airports would run out of capacity between 2018 and 2020. In all three forecast ranges, San Francisco would run out of capacity between the years 2001 and 2008. Oakland would run out of capacity after 2010. San Jose would run out of capacity at the end of the range.



The alternatives to the runway reconfiguration is a System Management and a Technology Enhancement.

System Management includes shifting demand to other airports, shifting demand to a new airport, using high speed rail, and using ferry service to achieve greater efficiency in the system.

Technology Enhancements include new technology such as landing navigation aids.

Summary findings indicate that the roles of the three airports have been historically defined and will not change in the future. San Francisco is the premiere international airport. Everything works efficiently in one area due to the infrastructure and because everything is in one place. A shift to another airport is highly unlikely. The hurdle of regulatory and legal mechanisms in this country and in Europe have made shift demand ineffective. Market demand has been the driving force and will continue to be the force.

Technological improvements were looked at individually and collectively. Regional analysis concluded that shifting demand, the high speed rail, ferry service or technological components combined in any fashion would not reduce the delay problems in any airport by any more than 8-15%. The runway reconfiguration will reduce delays up to 90%.

The conclusion of the regional study is that capacity in the entire Bay Area is in jeopardy in the next 10-15 years and that the alternatives to the runway reconfiguration are not feasible. The conclusion of both studies, and specifically Working Paper 3, is that runway reconfiguration is the only alternative to reduce delays and meet those objectives, and that the project is feasible.

Where do we go from here? Working Paper 3 is basically completed. Our stakeholders will be commenting on it by February 19. The regional analysis is also complete and we expect comments by the end of February. The final runway report will be forwarded to the Commission at the end of February or the beginning or March.

The next steps, pursuant to the Commission's concurrence, will be to get staff and the consultant's findings on the runway feasibility study so that the formal planning process for the runway reconfiguration program can begin.

\* \* \*

#### E. ITEMS INITIATED BY COMMISSIONERS:

Commissioner Ito asked if we were looking to expand the child care facility.

Mr. Martin responded that we are funding an expansion of the child care center in San Mateo County. The expansion is reflected in this years budget.

\* \* \*



F. POLICY:

Item Nos. 2 and 3 were adopted unanimously.

2. Policy on Runway Reconfiguration - No Shift in Aircraft Noise

No. 99-0016

Resolution adopting Commission policy that the Commission will not adopt any Runway Reconfiguration that will cause a shift in aircraft noise from one community to another in the Airport environs.

Mr. Martin said that a number of concerns have been expressed in San Francisco residents and neighborhood associations regarding a shift in noise. As Mr. Costas has reported, the results of the studies have indicated that there will either be no change in noise or a 1 db decrease in noise with the runway reconfiguration plan.

The proposed resolution states that as a policy there will be no shift in noise to San Francisco coming out of this final Runway Master Plan.

A shift in noise would be defined as a citizen would define it, and not in accordance with the Federal standard which is 65 CNEL. All of San Francisco is out of that CNEL area.

Commissioner Strunsky asked if we had data covering these areas so that in the future we can show that noise has not been shifted.

Mr. Martin responded that we have noise monitors in San Francisco and we are looking to place another monitor in the City. We have very detailed data for San Francisco.

Commissioner Strunsky noted that viewing an aircraft and hearing an aircraft are two distinctly different things.

Mr. Timothy Treacy, Chairman of the San Francisco Airport Noise Committee for the Board of Supervisors, and President of the Forrest Hills Association, consisting of over 700 homes west of Twin Peaks, said that their homes are selling in the million dollar range and the homeowners are very concerned about this plan.

He thanked Mr. Martin for proposing this resolution, but it is a very small part of the problem. He participated in the partnering sessions for Working Paper 3. Two things will occur in this program. Runway 1 will be moved approximately 3/4 of a mile north. All of the existing traffic taking off from Runway 1 and heading west or south will be moved 3/4 of a mile north and will fly over western and southern San Francisco at lower elevations. This will create a lot of noise.

At the last partnering meeting they asked the Airport's consultants about this and no answer was provided. There could be some rerouting to deal with.

All of the traffic now taking off on Runway 28 will be shifted to Runway 1 and all of





the large aircraft will fly over their neighborhood day and night. Mr. Costas indicated that there is noise mitigation on the Peninsula. This noise won't disappear but will be over western San Francisco ... specifically where monitor 26 is located.

According to the report, Working Paper 3 and the tables attached to it, notwithstanding claims being made by Airport staff, indicates that their noise will be increased by 20 decibels. That is quadruples the noise. Their quality of life and the value of their homes will be destroyed. The response they get is that there could possibly be some mitigation, such as routing aircraft north over the Golden Gate, however, there is nothing to implement this plan.

There are three elements involved ... this resolution, the FAA and the airlines. The noise lobbies complain about the noise and the FAA responds that their mandate is safety and efficiency. It has nothing to do about noise. The airlines take the position that cost is their concern. They are going to fly the most efficient routes.

The Forrest Hill residents have made an investment in their homes. They are entitled to certain expectations as to a level of quality of life. Their concerns are being "sluffed off" by comments that there may be mitigation some where along the way.

Even if the Commission adopts this resolution and we can agree on the definition of "no shift in noise", the FAA can shift aircraft over western San Francisco in the interest of safety and efficiency and that will be the end of it. It is no wonder that the Peninsula communities are so in favor of this proposal. The noise on the Peninsula will be moved to western and southern San Francisco.

He thanked the Commission for this particular effort.

Commissioner Berman asked Mr. Martin what the alternatives are regarding mitigation and the FAA?

Mr. Martin responded that the FAA would have to establish flight procedures in the context of the Airport's Master Plan and in the context of the environmental documents being prepared. Any time flight procedures are changed, environmental documents must be followed. Once flight procedures are established for our new runways, they will be locked in place, unless the FAA filed to change the environmental process. It would be as unlikely as it is in Washington, DC. When planes land at National, they come down along the river. The FAA will never change those procedures because it would clearly create a major shift in noise. The same would hold true in San Francisco.

This resolution states that "... the Commission will not adopt or develop a reconfigured runway project that would cause a shift in noise from one community to another." This Commission is going on record that it will not adopt a runway plan if there is a shift in noise.

Mr. Martin explained that 747s bound for Asia and Hawaii now take off on the 28s over So. San Francisco. A possible flight path might be adopted that would take those aircraft further north to the Golden Gate Bridge, avoiding any populated



areas. Another option would be for these flights to continue to take off on the 28s over So. San Francisco, but the European flights and Asian flights taking the polar route would use the 1s for departure.

We have received a positive informal reaction from the FAA, but they follow their established procedures and will not make a formal commitment until we get into the Master Plan and the EIR process.

Commissioner Berman asked if Mr. Treacy and the residents have any recourse.

Mr. Martin said that Mr. Treacy will continue to be invited to stakeholder meetings that will be held during the Master Plan process, and the runway reconfiguration will continue to be discussed at the Roundtable, of which Mr. Treacy is a member.

We want to maintain communication and have demonstrated to Mr. Treacy in the last six months our commitment to sharing all information with him and others.

Mr. Treacy said that they have worked very well with Mr. Martin in this regard and they have no complaints.

Commissioner Ito said that a representative from the Glen Park Association addressed the Commission regarding similar concerns. The action today to affirm the Commission's commitment not to shift noise is important and responsive to those concerns.

### 3. Adoption of Accounts Receivable Policy and Guidelines

No. 99-0017

Resolution establishing a new accounts receivable policy and guidelines which provides for pre-payment of fees for high risk tenants.

Mr. Bob Rhoades, Deputy Director, Business and Finance explained that this item establishes an accounts receivable policy and guidelines which provide for prepayment of fees for high risk tenants.

In accordance with the settlement agreement and the Lease and Use Agreement, there is a current practice to bill airlines for landing fees on the basis of landings reported on the 20th of the month, with payment due 30 days thereafter. Under this practice, which was established in 1981, certain tenants which are not timely in their payment very quickly go into arrears for four, five or six months before any action is taken. This then jeopardizes their performance bond.

The Airport's goal is to maintain a 90% current accounts receivable in any given month. Over the last 12 months we have received a 94% ratio. In the last six months, a 96% ratio. Our typical turnaround for undisputed accounts receivable is 11 days, which is well below our goal of 15 days.

This particular policy will send a clear message to certain tenants that we expect payment of their bills on time, and that the consequences of late payment will put



them into a "three strike" situation. At that point they will be required to pay their estimated landing fees and other rentals up front.

Commissioner Berman asked if this will alleviate the problem.

Mr. Rhoades responded that it will establish some very strong guidelines. We currently have two tenants with 30 day notices out against them. They catch up and then backslide. This clearly says that if a tenant has three such instances in a given year, they will be put on a pre-payment basis.

Commissioner Strunsky asked if any of the signators to the Lease and Use Agreement who are exempt from this process are significantly delinquent.

Commissioner Crayton asked if the M/WBEs will fall out consistently, and do we need to put controls in place to support them?

Mr. Martin responded that the primary tenants that have been delinquent over the years are charter airlines, airlines that are usually at SFO for two or three years, and ground transportation operators, such as van and limousine operators. It is very rare that we have a retail tenant or a major scheduled airline fall into a delinquency pattern.

\* \* \*

#### G. ITEMS RELATING TO MASTER PLAN PROJECTS:

Item Nos. 4 through 6 were adopted unanimously.

4. Award of Contract No. 5709A - AirTrain Road 6 and Rental Car Center Stations  
S. J. Amoroso Construction Co., Inc., - \$6,275,538

No. 99-0018

Resolution awarding Contract 5709A, AirTrain Road 6 and Rental Car Center Stations to S. J. Amoroso Construction Co., Inc., in the amount of \$6,275,538, contingent upon completion of HRC's review and Airport Staff concurrence with HRC's favorable opinion regarding S. J. Amoroso's compliance with M/WBE subcontractor participation requirements.

Mr. Tom Kardos, Deputy Director, Bureau of Design and Construction explained that this project is to construct two AirTrain stations along McDonnell Road ... one at the Rental Car Center and the other at the intersection of Road 6 and McDonnell Road, next to the present Engineering Building.

Four contractors submitted bids on November 24, 1998, with S. J. Amoroso submitting the low bid. All bids are greater than the \$5,307,105 baseline budget for this project. Staff conducted an analysis and concluded that the high bids can be attributed to the changed conditions in the Bay Area construction market.



The excess over the baseline budget will be transferred from Management Reserve.

The M/WBE participation goals were 18%/10% respectively. The low bidder's program proposes 1.3%/0%. The HRC found, and Airport staff concurs, that S.J. Amoroso's good faith effort meets the M/WBE subcontractor participation due to the fact that S.J. Amoroso's joint venture partner, Thomas S. Miller General Contractor, is a certified DBE and is a 51% participant in the joint venture at the prime level.

Commissioner Strunsky assumed that appropriate safety measures would be taken for the work performed at the Car Rental Facility.

Mr. Kardos responded that safety measures have been included. Also, the center of gravity of the construction is between the present two guiderails and away from the main traffic of the rental car users.

Commissioner Crayton asked why the participation goal was so low.

Mr. Kardos responded that the percentage is at the subcontracting level. The prime level was at 51%.

Mr. Martin added that the HRC determined that although Amoroso did not meet the specific M/WBE goals, they met the good faith requirements by virtue of the fact that their joint venture is a minority.

5. Modification No. 9 to Contract No. 5500E - International Terminal General Construction -Tutor-Saliba/Perini/Buckley, A Joint Venture - \$11,486,057

No. 99-0019	Resolution approving Modification No. 9 to Contract 5500E, International Terminal General Construction, with Tutor-Saliba/Perini/Buckley, A Joint Venture, in the amount of \$11,486,057, for work related to transferred scope, Airline revisions, design changes to facilitate construction, unanticipated conditions, and change impact mitigation. Funding sources are transfers from other Master Plan Budgets, Construction Contingency, and Management Reserve.
-------------	--

Mr. Kardos explained that this modification is a compilation of negotiated changes comprising scope transfers, changes triggered by airline-initiated revisions, design drawing coordination issues, unanticipated site conditions and change impact mitigation.

As detailed in the agenda item, the funding sources are the Airport's Capital Improvement Program budget (\$1.2 million), transfers from other contracts (\$200,000), contract contingency (\$4.1 million), and Management Reserve (\$6





million).

All of the changes have been reviewed and approved by the Master Plan Technical Advisory Board. The costs have been included in the cost forecasts presented to the Commission previously in our quarterly reports for 1998. This Commission action formalizes those forecasted changes.

Commissioner Strunsky noted that there will be extensive negotiations with Tutor-Saliba on future work and asked if the negotiations are moving ahead.

Mr. Kardos responded that they are presently under evaluation and staff will meet with Tutor-Saliba for initial discussions in the next week. We plan to formalize and finalize those negotiations no later than the middle to later part of February.

6. Modification No. 6 of Professional Services Agreement, Contract No. 5500, International Terminal - Skidmore, Owings & Merrill/Del Campo & Maru/Michael Willis & Associates, A Joint Venture - \$4,196,987

No. 99-0020

Resolution authorizing Modification No. 6 of Professional Services Agreement, Contract 5500, International Terminal with Skidmore, Owings & Merrill - Del Campo & Maru - Michael Willis & Associates, Joint Venture Architects in the amount of \$4,196,987.

Funding for this Modification will come from non-Master Plan Capital Improvement Project funds, Master Plan Management Reserve, Art Enrichment, and the Airport's contribution to BART's SFO extension.

Mr. Kardos explained that this modification is a compilation of changes reviewed and approved by the Airport's Professional Services Fee Review Committee. It will clean the slate regarding all the changes to date and will provide adequate contingency budget to take us through contract completion.

Funding sources for this modification are the Airport's \$200 million contribution to BART's SFO Extension (\$200,000), our Capital Improvement Program budget (\$300,000), Art Enrichment funds (\$200,000), and Management Reserve (\$3.7 million).

All costs associated with this modification have been included in the cost forecasts presented to the Commission in our quarterly reports for the calendar year 1998. This Commission action formalizes those forecasted changes.

\* \* \*

H. ITEMS RELATING TO ADMINISTRATION, OPERATIONS & MAINTENANCE:



Item Nos. 7 through 9 were adopted unanimously.

7. Modification No. 1 to Contract No. 1962 - Waste Treatment Plant Improvement Professional Services Contract with CH2MHill - \$1,015,000

No. 99-0021

Resolution authorizing Modification No. 1 to Contract No. 1962, Waste Treatment Plant Improvement, a Professional Services Contract with CH2MHill, in the amount of \$1,015,000.

Mr. Ernie Eavis, Deputy Director, Facilities Operations and Maintenance explained that the original contract with CH2MHill was to modify the sewage treatment plant.

Staff provided a cost analysis and peer review and in the beginning of the year we were ready to go out for bid. It was about that time that the Airport announced that a new runway study would take place. Some of those options included in the runway study would demolish the existing sewage treatment plant within a number of years. It was decided to hold off with this project until we knew where the runways would be located.

The third alternative would not touch the existing treatment plants. While we were doing studies to determine how we might be able to save money, we took a look at a number of bare bones modifications to the treatment plants. We found a new process that has been used for almost a decade. That process would cost less money, use less land and provide the option to make changes to the plant if the State alters its guidelines.

This modification approves a change in the design to use the new treatment. It will cost \$1-million in design, but will save between \$1-million to \$4-million in the overall budget in the long run.

Commissioner Ito asked about the timeline.

Mr. Eavis responded that the Regional Board has requested that we have a way of shutting down portions of the treatment plant to perform maintenance. At this point we can't do that. We hope to have the whole thing up and running within 26 months.

Commissioner Strunsky assumed that this is just design costs. Down the road there will be a construction project.

Mr. Eavis responded that it is. We believe that the construction costs will be lower than what would have been presented.

8. Award of the New International Terminal Nature Theme Store Lease - Discovery Channel Stores, Inc. - Minimum Annual Guarantee - \$260,000

No. 99-0022

Resolution awarding the New International Terminal Nature Theme Store Lease to Discovery



Channel Stores, Inc. and directing the Commission Secretary to seek approval from the Board of Supervisors.

Mr. Rhoades explained that three bids were received on December 22, 1998, with Discovery Channel submitting the high bid. Discovery Channel operates over 130 stores, many of which are in the Bay Area. It had annual sales in 1998 in excess of \$135 million. Discovery Channel recently purchased Nature Company and is now in the process of converting those stores.

Discovery Channel has been reviewed by the Human Rights Commission and given provisional compliance to the Equal Benefits Ordinance. The HRC has also approved its affirmative action plan.

9. Authorization to Issue a Request for Proposals for the Development, Redesign and Hosting of the Airport's Website

No. 99-0023

Resolution authorizing Director to Issue Request for Proposals for the Development, Redesign and Hosting of the Airport's Website.

Mr. Peter Nardoza, Deputy Director, Public Affairs explained that approval of this item will take the existing website and bring it into the 21st century. We hope to have an interactive website where people can make comments, view conditions of the roadways, parking availability. We also hope to incorporate a flight information display system.

Commissioner Berman asked if there will be hidden costs.

Mr. Nardoza responded that at this point we do not know the cost. Staff will return to the Commission after the pre-bid conference.

Commissioner Ito asked if there will be an outreach for this contract.

Mr. Nardoza responded that staff will use both the Airport's and the HRC's M/WBE list for any company dealing with websites, computers, etc.

\* \* \*

I. **CONSENT CALENDAR OF ROUTINE ADMINISTRATIVE MATTERS:**

Item Nos. 10 through 15 were adopted unanimously.

10. Authorization to Enter into Agreement with Letter of Credit Provider in Connection with the Commercial Paper Program and to Extend the Authorized Period for the Issuance of Refunding Bonds

No. 99-0024

Resolution authorizing an agreement with Societe Generale, to provide a \$300 million letter of credit



required for the Airport's Commercial Paper Program and authorization to extend the authorized period for the Issuance of Refunding Bonds to April 30, 2003.

11. Modification No. 2 for Geotechnical Services at the North Cargo Project - Geotechnical Consultants, Inc. - \$40,000

No. 99-0025

Resolution approving Modification No. 2 to Geotechnical Consultants, Inc. for Contract 5758, in the amount of \$40,000. Contract provides for soil engineering services for the North Cargo Facility/Apron Project. The Modification No. 2 funds will be used to investigate excessive soil settlement, prepare a remedial plan and conduct field observation at the construction site.

12. Award of Contract No. 3572A - SuperBay Hangar - Installation of Fall Protection System - Nutek Construction, Inc. - \$499,988

No. 99-0026

Resolution awarding Contract 3572A, SuperBay Hangar Installation of Fall Protection System to Nutek Construction, Inc. in the amount of \$499,988.

13. Bid Call - Contract No. 4059 - International Terminal 3rd Floor Roof Addition

No. 99-0027

Resolution approving the scope, budget, and schedule, and authorizing the Director to call for bids for Contract No. 4059, International Terminal 3rd Floor Roof Addition when ready. \$270,000.

14. Advance Approval of Noise Easements, Fiscal Year 1999/00, and Approval to Quitclaim Recorded Noise Easements

No. 99-0028

Resolution approving in advance the acquisition of noise easements for Home Insulation funding pursuant to the Master Plan Memorandum-of-Understanding ("MOU"), and approving the quitclaim of Recorded Noise Easements.

\* \* \*

J. PUBLIC HEARING:

The Public Hearing was convened at 9:55 AM and adjourned at 10:12 AM,





there being no comments from the public. Item No. 15 was adopted unanimously.

15. Hearing on Proposed Airport Budget for FY 1999/00 - \$437.9 million

No. 99-0029

Mr. Marcus Perro, Chief Financial Officer briefed the Commission on the budget (see attachment). He explained that because of our successful concession program the annual service payment to the City will reach \$24,000,000.

We held the budget for the Police Department fairly tight while conducting a survey of other airports to determine if our staffing level was adequate. As a result of that survey, it was determined that staffing needed to be increased by 55 employees.

We are adding about 314 Airport staff as part of a three year plan to increase staffing by 700 positions.

The debt service increase is 13% over last year, and a 200% increase over Fiscal Year 1994/95, the first year of the Master Plan.

\* \* \*

K. NEW BUSINESS:

This is the "Public Comment" section of the calendar. Individuals may address the Commission on any topic within the jurisdiction of the Airport Commission for a period of up to three (3) minutes. Please fill out a "Request to Speak" form located on the table inside the entrance to Room 428 and submit it to the Commission Secretary.

Mr. Barry Toronto, United Taxicab Workers, commented that Duke Briscoe, Deputy Airport Director for Operations continues to have conversations with the cab drivers about their problems.

Mr. Toronto explained that there is a continual problem with the taxicab starters. They don't pay attention to what is happening at the curbs. Consequently, flights come in and passengers are left waiting at the curb for taxis, but the taxis are not called up from the garage. This happens time and time again.

He asked the Commission to look into this.

\* \* \*

L. CORRESPONDENCE:

There was no discussion by the Commission.

\* \* \*



M. CLOSED SESSION:

Discussion and vote pursuant to Sunshine Ordinance Section 67.11 on whether to conduct a Closed Session.

The Commission voted unanimously to go into closed session. The meeting was recessed at 10:30 AM and the Commission went into closed session.

The Airport Commission will go into closed session in accordance with Government Code Section 54956.9(a) to confer with legal counsel regarding pending litigation entitled the City and County of San Francisco vs ARCO.

Discussion and vote pursuant to Brown Act Section 54957.1 and Sunshine Ordinance Section 67.14 on whether to disclose action taken or discussions held in Closed Session.

The meeting was reconvened at 10:44 AM. The Commission determined that it was not in the public interest to disclose the nature of the closed session and voted unanimously not to disclose it.

\* \* \*

N. ADJOURNMENT:

There being no further calendared business before the Commission the meeting 54956.9(b)(1) to confer with legal counsel regarding potential litigation. adjourned at 10:45 AM.

  
Jean Caramatti  
Commission Secretary



# SAN FRANCISCO INTERNATIONAL AIRPORT

## BUDGET SUMMARY

(in millions)

CATEGORY	APPROVED FY 1998/99	PROPOSED FY 1999/00	CHANGE	COMMENTS
PERSONNEL	\$67.6	\$89.8	33%	New staff added for productivity and service enhancements: - Productivity: 16,525 enhancements per employee - Full-employment productivity: 15,100 enhancements per employee
CONTRACTUAL AND OTHER SERVICES	\$18.4	\$22.7	23%	Improved shuttle bus service to and from existing and new parking facilities; increased terminal maintenance agreements.
MATERIALS AND SUPPLIES	\$7.1	\$8.4	18%	
INTERDEPARTMENTAL SERVICES & WORKORDERS				
- SERVICES OF OTHER DEPARTMENTS	\$57.5	\$64.8	13%	
- ANNUAL SERVICE PAYMENT	\$22.4	\$24.0	7%	
TOTAL	\$79.9	\$88.8	11%	
DEBT SERVICE	\$127.9	\$145.0	13%	
AIRPORT PROGRAMMATIC EXPENDITURES	\$45.3	\$67.5	49%	Includes Curbside Management Program, parking garage enhancements, new International Terminal Concession Outreach, Noise Mitigation Program, and other expenditures related to the Master Plan.
EQUIPMENT, FACILITIES MAINTENANCE, FIXED CHARGES, AND CAPITAL PROJECTS LESS THAN \$100K	\$14.7	\$15.7	7%	
TOTAL	\$360.9	\$437.9	21%	



# SAN FRANCISCO AIRPORT COMMISSION



## MINUTES

February 16, 1999  
9:00 A.M.

✈ ROOM 400, CITY HALL  
400 VAN NESS AVENUE  
CITY AND COUNTY OF SAN FRANCISCO

WILLIE L. BROWN, JR., MAYOR

## COMMISSIONERS

HENRY E. BERMAN  
President

LARRY MAZZOLA  
Vice President

MICHAEL S. STRUNSKY

LINDA S. CRAYTON

CARYL ITO

JOHN L. MARTIN  
Airport Director

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Minutes of the Airport Commission Meeting of  
February 16, 1999

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#### ADDENDUM TO CALENDAR:

##### DIRECTOR'S REPORT:

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# AIRPORT COMMISSION MEETING MINUTES

February 16, 1999

## A. CALL TO ORDER:

The regular meeting of the Airport Commission was called to order at 9:00 AM in Room 400, City Hall, San Francisco, CA.

\* \* \*

## B. ROLL CALL:

Present: Hon. Larry Mazzola, Vice President  
Hon. Michael S. Strunsky  
Hon. Linda S. Crayton  
Hon. Caryl Ito

Absent: Hon. Henry E. Berman, President

\* \* \*

## C. ADOPTION OF MINUTES:

The minutes of the regular meeting of January 19, 1999 were adopted unanimously.

No. 99-0033

\* \* \*

## D. ITEMS INITIATED BY COMMISSIONERS:

There were no items initiated by Commissioners.

\* \* \*

## E. ITEMS RELATING TO MASTER PLAN PROJECTS:

1. Modification No. 5 to Contract 5520.E -Boarding Area G General Building Construction - \$3,904.955

No. 99-0034

Resolution approving Modification No. 5 to Contract 5520E, Boarding Area G General Building construction in the amount of \$3,904.955 for Concession changes, Airlines revisions, VIP Lounge, transferred scope, design changes to facilitate construction, and unanticipated conditions. Funding sources are Security and Special Systems, SFO-Fuel, Capital Improvement Program, Management Reserve, and construction



contingency.

Mr. Tom Kardos, Deputy Director, Bureau of Design and Construction explained that this modification is a compilation of negotiated changes comprising scope transfers, changes triggered by the addition of a new VIP lounge, the concessions and airline-initiated revisions, design drawing coordination issues facilitating construction and unanticipated conditions. It also includes a 14-day no-cost time extension associated with last year's El Nino.

As detailed in your agenda package, the funding sources are the Airport's Capital Improvement Program budget, transfers from other contracts, contract contingency and Management Reserve.

All of the changes have been reviewed and approved by the Master Plan Technical Advisory Board. The costs have been included in the budget forecasts presented to the Commission previously in our quarterly reports for 1998. This Commission action formalizes those forecasted changes.

M/WBE participation remains as in the base contract at 18.3%/0.9% respectively.

Commissioner Strunsky asked if this was in the last quarterly report.

Mr. Kardos responded that it has been in the last three quarterly reports.

Commissioner Strunsky asked if the airlines are still submitting requests.

Mr. Kardos responded that we are no longer accepting requests.

Commissioner Strunsky asked if the same was true for concession changes.

Mr. Kardos responded that it is.

\* \* \*

#### F. ITEMS RELATING TO ADMINISTRATION, OPERATIONS & MAINTENANCE:

Item Nos. 2 through 8 were adopted unanimously. Commissioner Crayton was recused from voting on Item No. 4.

2. Award of Post-Security Master Retail/Duty Free Concession Lease for the New International Terminal to DFS Group L.P. - Minimum Annual Guarantee of \$26,100,000.08

No. 99-0035

Resolution awarding the Post-Security Master Retail/Duty Free Concession Lease for the New International Terminal to DFS Group L.P. with a first year Minimum Annual Guarantee of \$26,100,000.08.

Mr. Bob Rhoades, Deputy Director for Business and Finance said that this is the





largest merchandising contract ever let in the Airport's history.

For comparative purposes, the current International Terminal has a combination of just over 21,000 sq. ft. in duty free and duty paid retail facilities in six primary locations. The new contract will have almost 52,000 sq. ft. of retail and duty paid merchandising in 23 locations.

This is a very unique contract and there are only a few companies in the world that could handle a contract of this size.

On January 19, 1999 the Airport received a single qualification proposal and bid submission from DFS Group L.P., better known as DFS West. The proposal was reviewed by a panel and deemed to be responsive. Subsequently, on February 3, 1999, a public bid opening was held. The bid submitted by DFS was in the amount of \$26,100,000.80 for the first year of the contract.

DFS came in with a very aggressive subleasing plan involving five minority and women-owned businesses who will occupy in excess of 15,600 sq. ft. This is approximately 300 times what the DBE program in the existing International Terminal occupies.

DFS has been operating at the Airport since 1973. They are the current leaseholder for the Duty Free contract as well as the Duty Paid contract.

Commissioner Ito asked if these subcontractors are new to the Airport.

Mr. Rhoades responded that four of the five are existing minority and women owned businesses at the Airport. The fifth, Ralph Glenn, is a new minority operator, and a former employee of DFS.

Commissioner Crayton commented that she is particularly happy about this contract. It is important to continue to seek out new entrants. She is also very pleased that women will have more space in terms of tenant mix. She thanked Mr. Rhoades for working hard to make that happen.

Commissioner Strunsky noted that this is essentially a \$261 million minimum over the course of the lease. This is a stunning contract and congratulated Mr. Rhoades.

Mr. Rhoades thanked Commissioner Strunsky and said that it is the cornerstone of what will be a fabulous new program.

Commissioner Crayton acknowledged and thanked Sandra Crumpler and her staff for helping to put the pieces together for this contract.

3. Award of Contract No. 2353 - Westfield Cargo Facilities, Building 648 - Dennis J. Amoroso Construction Company, Inc. - \$12,988,000

No. 99-0036

Resolution awarding Contract 2353, West Field Cargo Facilities, Building 648 to Dennis J.



Amoroso Construction Company, Inc., in the amount of \$12,988,000.

Mr. Ernie Eavis, Deputy Director, Business and Finance explained that this item awards a contract that will construct the West Field Cargo Facilities which will consist of approximately 140,000 sq. ft. of office and cargo facilities east of the existing postal facility at the end of Road R-6.

Eight bids were received, with Dennis J. Amoroso submitting the low bid. The Human Rights Commission and Airport staff have determined that Dennis J. Amoroso made a good faith effort to meet the M/WBE goals.

Commissioner Strunsky said that \$900,000 was left on the table and asked if Mr. Amoroso is comfortable taking this job?

Mr. Eavis responded that staff spoke with him last week and Mr. Amoroso is still comfortable taking this job.

Commissioner was recused from voting on Item No. 4 due to a conflict of interest. The vote to recuse was unanimous. Item No. 4 was adopted unanimously.

4. Award Contract for Telecommunications Services in the New International Terminal Building - TCG San Francisco, dba AT&T Local Services - \$9,500,000

No. 99-0037	Resolution awarding a seven-year agreement with TCG San Francisco, dba AT&T Local Services, for the installation, provisioning, and maintenance of voice, data and video services in the New International Terminal Complex via a fiber optic telecommunications infrastructure for a not-to-exceed amount of \$9,500,000.
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Mr. Rhoades explained that this is a seven year agreement with TCG San Francisco, dba AT&T Local Services for the installation, provisioning and maintenance of voice, data and video services in the New International Terminal Complex via fiber optics. This is part of our telecommunications master plan.

The Airport is constructing a Minimum Point of Entry (MPOE) Building. All telecommunication service providers will be required to terminate their circuits at the MPOE and the Airport will provide the medium to serve the Airport Commission employees and various tenants.

This is the first phase of what will be the telecommunications backbone for the entire Airport. The new International Terminal will be the first to come on line. Subsequently, other facilities around the Airport will be added to it. In the future, we are looking at the use of shared tenant services, with the Airport becoming the primary provider.

Commissioner Strunsky asked if we have evaluated the security issue of having all



of our communications going through one point?

Mr. Rhoades responded that we are going to have a second point of entry on the south side of the Airport in the near future.

Mr. Kardos added that the MPOE will have a redundant supply. We will be connected to two central offices, one in San Francisco and one in Oakland. If one is interrupted, the other supplies us within a nano second.

The life safety systems of the building are designed for immediate response. Ultimately, once the Boarding Area A apron is completed in the northwest corner of the apron, the space becomes available and we will immediately build a second building providing a redundant connection to the ring that AT&T provides.

Commissioner Strunsky asked what the timing will be.

Mr. Kardos responded that the timing between the two MPOEs will be 12 months.

#### 5. Approval of Proposed Parking Rate Increase

No. 99-0038

Resolution approving proposed \$1 increase in the Maximum Daily Long Term Public Parking Rates effective March 22, 1999.

Mr. Martin explained that we are proposing a \$1.00 a day parking rate increase in the long term lot. This is the first increase in three years and roughly keeps us up with inflation.

He emphasized that the parking rate structure in place has been one of the key elements in encouraging the use of transit alternatives. It has been one of the elements that has allowed us to achieve the highest level of transit ridership of any airport in the country. About 36% of our passengers use some form of transit.

This also keeps us in line with the off-Airport operators, many of whom have already gone beyond \$11 and \$12 a day.

Commissioner Mazzola asked if the penalty imposed for a lost ticket was usual.

Mr. Martin responded that it is a \$12 minimum, so if a vehicle is in the lot for only one hour, they will be charged \$12. If they are in the lot for 23 hours, it is still \$12. AMPCO, the parking operator, goes through the lot each night and logs each license plate, so we know how long a vehicle is in the lot if a ticket is lost.

Commissioner Crayton asked how we will publicize this to the public.

Mr. Martin responded that notices are published at the long term lot.

#### 6. Authorization to Solicit Proposals for a Document Management System



Ms. Theresa Lee, Deputy Director, Administration explained that a Document Management System provides for a standardized and more efficient way of producing, saving and retrieving documents.

As part of the Airport Information Technology Strategic Plan, the pursuit and exploration of a Document Management System was an integral recommendation. This recommendation would further strengthen our technology foundation.

IT staff convened a meeting of employees that represented cross-divisional responsibilities. They reviewed, discussed, and evaluated the requirements and merits of such a system. The conclusion was that the Airport should pursue such a product.

The features include comprehensive imaging, which is an unlimited scanning capability; workflow, which is user friendly through a graphical user interface; whole text indexing, search and retrieval capability; and, increased security with advanced encryption.

We plan to phase in the implementation of a DMS, starting with five sections with approximately 100 users.

Commissioner Strunsky assumed that the Airport's physical record drawing will tie into this.

Ms. Lee responded that it will.

Commissioner Strunsky asked how Y2K compliance is proceeding?

Ms. Lee responded that we are on target with a very aggressive time line. We are targeting June 30 to test all systems for which the Airport is responsible. There may be one or two systems that may slip to a September date.

Commissioner Crayton asked if other airports were also using the DMS also.

Ms. Lee responded that other airports are using a DMS.

7. Authorization to Issue a Request for Qualifications for the Planning and Execution of Special Events for the Opening of the New International Terminal

No. 99-0040

Resolution authorizing staff to a Issue Request for Qualifications for the Planning and Execution of Special Events for the Opening of the New International Terminal.

Mr. Peter Nardoza, Deputy Director, Public Affairs said that at this point staff is planning seven days of events that will celebrate the opening of the building. The events anticipated range from contractor barbeques to a formal sit-down dinner.





8. Lease of-Off-Airport Office Space

No. 99-0041

Resolution approving the City's lease of off-Airport office space at 433 So. Airport Boulevard, Burlingame, CA, between Bayside Corporate Center, as Lessor and City and County of San Francisco, acting by and through its Airport Commission, as Lessee.

Mr. Rhoades explained that this resolution seeks approval to lease office space in Burlingame consisting of approximately 12,000 sq. ft. for an initial annual rental rate not to exceed \$432,000.

The purpose for leasing this particular space is in conjunction with our runway study. We will need considerable space to house not only staff that will be working on this project, but also the consultants retained as the EIR/EIS process moves forward.

We are at office space capacity on Airport.

\* \* \*

G. CONSENT CALENDAR OF ROUTINE ADMINISTRATIVE MATTERS:

Item Nos. 9 through 17 were adopted unanimously.

9. Award Contract 4011 - Airport Minimum Point of Entry (MPOE) Building No. 1 Nutek Construction, Inc. - \$506,200

No. 99-0042

Resolution awarding Contract 4011, Airport Minimum Point of Entry (MPOE) Building No. 1 to Nutek Construction, Inc., in the amount of \$506,200.

10. Award Contract 2353.4 - Materials Testing and Special Inspection Professional Services Contract - Coverall Engineering and Construction, Inc. - \$104,880

No. 99-0043

Resolution awarding Contract 2353.4, Materials Testing & Special Inspection (MTSI) Professional Services for West Cargo Building #648 (Airborne) to Coverall Engineering and Construction, Inc. in the amount not-to-exceed \$104,880.

Funding for this contract is the Airport's Capital Improvement Program (CIP) budget. There is no impact on the Master Plan Baseline Budget.

11. Modification No. 1 to Professional Service Agreements with Executive Recruitment



Firms - Quest Point Group, Blue & Garni, and Boyden International - \$300,000

No. 99-0044                      Resolution Approving Modification No. 1 to Increase funding of Professional Service Agreements with Quest Point Group, Blue & Garni, and Boyden International, to assist in Meeting Senior Management Staffing needs Associated with Airport Expansion.

12. Authorization to Solicit Proposals for an Issuing & Paying Agent in Connection with the Commission's Commercial Paper Program

No. 99-0045

13. Bid Call - Contract 4126 - Utility Service Repairs and Miscellaneous Work F/Y 1999

No. 99-0046                      Resolution approving the scope, budget, and schedule and authorizing the Director to call for bids for Contract No. 4126, Utility Service Repairs and Miscellaneous work F/Y 1999.

14. Bid Call - Contract No. 4076 - International Terminal F.I.S. Re-Carpet

No. 99-0047                      Resolution approving scope, budget and schedule for Contract No. 4076, International Terminal F.I.S. Re-Carpet, and authorizing the Director to call for bids when ready.

15. Bid Call - Contract No. 3935 - Emergency Carpet Repair

No. 99-0048                      Resolution approving scope, budget and schedule for Contract No. 3935, Emergency Carpet Repair, and authorizing the Director to call for bids when ready.

16. Bid Call - Contract No. 3698A - West Field Washdown Facility

No. 99-0049                      Resolution approving scope, budget, and schedule, and authorizing the Director to call for bids for a West Field Washdown Facility.

17. First Amendment to Sublease of Office Space to Airport from Northwest Airlines, Inc. under Lease No. 83-0185



Resolution approving 1st Amendment to sublease of office space to Airport from Northwest Airlines to provide 2,600 square feet of office space for expansion of Human Resources Department Staff.

\* \* \*

## ADDENDUM TO MEETING:

### DIRECTOR'S REPORT:

#### 18. Flight Delays and Possible Near Term Solutions

Mr. Martin explained that the flight delay problem at SFO is serious. In 1998 we had an on-time performance of 64.8%, which is the worst on-time record of any major U.S. airport.

We are working on the problem from both a long term and near term approach. In the long term we are looking at the runway reconfiguration, which he continues to believe is the real solution. All of the short term solutions are really bandaids to the problem and will not eliminate the delays faced by travelers today.

This problem becomes very serious to the business community of the entire San Francisco Bay Area when travelers routinely face 90 to 120 minute delays on bad weather days. It is also a serious problem for communities that are dependent on SFO, such as Sacramento, Monterey, and even Portland and Reno, where their travelers are trying to make connections.

On a good weather day we can handle 60 arrivals per hour. At no point in time can we exceed that number.

Bad weather is defined as any day when there is cloud cover below 2,300 ft. Many travelers don't understand that delays are caused when there is cloud cover. Weather conditions cause us to drop to one runway due to the close proximity of our runways ... at only 750 feet apart, they are the closest of any parallel runways at any major airport in the country.

There are many hours during the day when we exceed the number of flights that we can actually handle. On a bad weather day, when we have cloud cover from the beginning to the end of the day, only 30% to 40% of the arrivals are likely to be on time.

We are working closely with the FAA, the airlines and the Airline Pilots Association on a number of technology systems that are coming on line that might be applied at SFO. These systems could potentially raise the bar to possibly 40 arrivals per hour when cloud cover is between 1,300 and 2,300 feet. About 15% of the cloud cover is within that range. This would be a real improvement, but by no means solves the problem.

The airlines try to consolidate flights on bad weather days to try to reduce the number of operations. This is very frustrating to the traveler, but without the correction in the



system we would be overrun with flights. This happened during Thanksgiving when we had full flights and they could not be consolidated. Flights backed up to 3:00 AM and 4:00 AM.

United also tries to switch to larger aircraft to try and catch up on delays. United often uses 747s on its LAX routes on bad weather days.

Staff has undertaken a study to justify making certain local rules which would require the airlines to take certain steps to reduce delays, such as requiring airlines to use larger aircraft in heavily traveled markets.

The heaviest traveled markets in terms of flight operations are LAX, which has 42 arrivals and departures a day; 22 from Sacramento; 16 from Monterey; 18 from Fresno; 11 from Eureka. Those four cities, apart from LAX, account for 67% of the flight operations. Those cities are all served almost entirely by propellor aircraft. They represent almost 10% of our daily arriving flights, but handle less than 1% of our passengers. It is a very inefficient use of air space capacity.

We looked at what kinds of improvements we might achieve if these rules proved to be justified and non-discriminatory. It shows that If we required the airlines to reduce by about half the number of flights from Sacramento, Eureka, Fresno and Monterey, and required the use of 757-type aircraft to LAX, we would achieve a 3% reduction in the number of flights above the line.

We will be concluding the study within the next two months and will present the findings to the Commission at that time.

Both the technology that we are exploring and the rules requiring airlines to use larger aircraft are only incremental steps toward reducing delays. We will still have significant delays up until the time that we can reconfigure the runways.

In May and June of 1998 we had a lot more days of cloud cover, translating to a poor on-time performance record. December of 1998 was better than the last two years because of the weather.

In general, over the last four years, the FAA rules have tended to work against us in requiring greater separation distances for larger aircraft.

We are also working very acively with the FAA in trying to get a Center Terminal Area System installed which would allow as close a sequencing between aircraft as possible for arriving aircraft. That might give us a 4 or 5% gain in the efficiency of the FAA's management of arriving aircraft.

We are approaching the problem from every angle to try and reduce the delay impact to the traveling public. We are also moving full speed ahead on the runway study to address the underlying problem.

Commissioner Strunsky asked if it would make sense to try to encourage passengers to be flexible in their travel plans, if possible.





Mr. Martin responded that the earlier a passenger travels, the better off he or she will be.

Commissioner Ito noted that there was some strong reaction from the airlines to his initial proposal for these reductions.

Mr. Martin said that he has excellent cooperation with the airlines and the FAA in exploring all of the technology that can be used to deal with the delay problem. He has had informal conversations with the airlines regarding the use of larger aircraft in certain markets. He understands the problems the airlines have, given the various types of agreements they have in place with contract commuter carriers and their unions. Nevertheless, we will work in close cooperation with the airlines in the study being undertaken. He has committed to releasing the working drafts of the study to them for input. Ultimately, he hoped that we won't need to adopt rules and that the airlines and the Airport can find ways of consolidating flights and using larger aircraft.

Commissioner Ito was surprised to read the frequency of the commuter flights. She asked what the capacity of these flights are.

Mr. Martin responded that the two carriers operating to Sacramento are USAir Express and United Express.

Mr. Tryg McCoy, Operations, responded that USAir Express operates 18 seat aircraft, and United Express operates 30 seat.

Mr. Martin said that two flights to New York will handle as many passengers as the 22 flights to Sacramento. It is a real strain on the system. We need adequate service to these markets, but the travelers to those markets also want predictability. Initial informal feedback from officials from those cities are supportive of larger aircraft serving their markets, particularly jet aircraft.

\* \* \*

#### H. NEW BUSINESS:

This is the "Public Comment" section of the calendar. Individuals may address the Commission on any topic within the jurisdiction of the Airport Commission for a period of up to three (3) minutes. Please fill out a "Request to Speak" form located on the table inside the entrance to Room 428 and submit it to the Commission Secretary.

There were comments from the public.

\* \* \*

#### I. CORRESPONDENCE:

There was no discussion by the Commission.

\* \* \*



J. CLOSED SESSION:

Discussion and vote pursuant to Sunshine Ordinance Section 67.11 on whether to conduct a Closed Session.

The Commission voted unanimously to go into closed session. The public meeting recessed at 9:45 AM to go into closed session.

The Airport Commission will go into closed session in accordance with Government Code Section 54956.9(a)(1) to confer with legal counsel regarding the settlement of an unlitigated claim entitled Mendelian/Rampart Joint Venture v City and County of San Francisco by approval of Modification No. 1 to Contract No. 3069E, Garage Waterproofing Repair in the amount of \$323,961; and Government Code Section 54956.9(b)(1) regarding potential litigation.

Discussion and vote pursuant to Brown Act Section 54957.1 and Sunshine Ordinance Section 67.14 on whether to disclose action taken or discussions held in Closed Session.

The Commission reconvened its meeting at 10:00 AM and determined that it was not in the public interest to disclose the nature of the closed session and voted unanimously not to disclose it.

\* \* \*

K. ADJOURNMENT:

There being no further calendared business before the Commission the meeting adjourned at 10:02 AM.

  
Jean Caramatti  
Commission Secretary



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16/99

# SAN FRANCISCO AIRPORT COMMISSION



## MINUTES

March 16, 1999  
9:00 A.M.

✈ ROOM 400 - CITY HALL  
400 VAN NESS AVENUE  
CITY AND COUNTY OF SAN FRANCISCO

WILLIE L. BROWN, JR., MAYOR

## COMMISSIONERS

HENRY E. BERMAN  
President

LARRY MAZZOLA  
Vice President

MICHAEL S. STRUNSKY

LINDA S. CRAYTON

CARYL ITO

JOHN L. MARTIN  
Airport Director

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Airport Commission Meeting Minutes  
March 16, 1999

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# AIRPORT COMMISSION MEETING MINUTES

March 16, 1999

## A. CALL TO ORDER:

The regular meeting of the Airport Commission was called to order at 9:00 AM in Room 400, City Hall, 400 Van Ness Avenue, San Francisco, CA.

\* \* \*

## B. ROLL CALL:

Present: Hon. Larry Mazzola, Vice President  
Hon. Michael S. Strunsky  
Hon. Caryl Ito

Hon. Linda S. Crayton arrived at 9: 04 AM.

Absent: Hon. Henry E. Berman, President

\* \* \*

## C. DIRECTOR'S REPORTS:

### 1. Master Plan Mitigation Program - 1998 Summary and Status Report

Mr. John Martin, Airport Director explained that when the Commission adopted the Master Plan in 1992, a mitigation program was also adopted. Each year a presentation is made to the Commission on its status.

Ms. Wanda Williams, Deputy Director, Planning explained that this report provides the status of over 100 mitigation measures that were agreed to as part of the Master Plan Final Environmental Impact Report approved by this Commission in 1992. Many of these measures have been completed since 1992, others will be phased in after this year.

The 1998 highlights included continuous funding of the Airport Community Roundtable, which includes funding for staffing for the Roundtable for noise issues and a part time administrative assistant, increasing the threshold over Woodside, and other altitude increases to prevent noise in Peninsula cities, and coordination with the ATA and the airlines to gradually phase out Stage 2 operations.

Additionally, the Airport obtained a new noise variance from CalTrans on September 20, 1998 for a three year period.

Some of the significant transportation programs include work done on the Multi-Modal Transportation Center, including looking installation of a Bay Trail in the Multi-Modal Center. This would allow for pedestrian and bicycle amenities and transfer locations between bus riders, bicyclists, and pedestrians to SFO





destinations and other areas around the Bay Area.

Work has been done on the CalTrain-SFO Shuttle. A passenger survey indicates that 43% of our CalTrain riders are SFO employees and 39% are air passengers. Sixty percent chose to use the shuttle in lieu of an available automobile.

Wetlands and natural resource measures that have been completed or worked on during 1998 include Crissy Field, which was negotiated as part of the 1992 FEIR. Work at India Basin is on-going. Work at Palo Alto Harbor Point was completed. We are in the process of negotiating with the Water Quality Board, Fish and Wildlife Services, and the Army Corps of Engineers to allow for additional off-site wetlands to be incorporated at Bair Island and other areas throughout the Bay Area.

In 1998 the Airport was awarded an Environmental Distinction Award by SAMCEDA (San Mateo County Economic Development Association) for being one of the most environmentally progressive organizations in the region.

\* \* \*

#### D. ITEMS INITIATED BY COMMISSIONERS:

Commissioner Strunsky said that last week he flew to Los Angeles twice on United Airlines. Three of those four trips were cancelled. United ticket personnel claimed that the cancellations were caused because they could not land at SFO. He spoke with a number of people in San Francisco who had reported that it had been sunny in San Francisco most of the day.

He was having a hard time determining if United was using SFO's admitted runway configuration problems to their advantage. He suggested that the Airport present an analysis to the Commission of United's cancelled flights and the reason for those cancellations.

He felt that a lot of our problems have been well delineated by Mayor Brown. It would be interesting to know if they are truly 100% our problems or if United Airlines is taking advantage of the situation for their own interest in cancelling these flights and putting San Francisco at the low end of the priority problem solving mode.

Mr. Martin said that he would look into it with the FAA. However, in the interest of fairness he will have staff prepare an analysis for cancellations of all airlines.

Commissioner Strunsky suggested that the analysis cover a 30 day period, and before the winter ends. He believed that the San Francisco to Los Angeles route is impacted the most.

Commissioner Mazzola agreed with Commissioner Strunsky and said that he has never had a delay on United where SFO has not been blamed.

\* \* \*

#### E. ITEMS RELATING TO MASTER PLAN PROJECTS:



Authorization to Purchase and Install a Precision Runway Monitor from Raytheon Systems Company - \$10,521,000

No. 99-0052

Resolution authorizing an expenditure of \$10,521,000 for payment to Raytheon Systems Company for a Precision Runway Monitor System.

Mr. Martin said that this system will help the Airport in the interim with the delay problem, particularly on high cloud cover days. It was a tremendous success for us to be able to obtain a commitment from the FAA on such a short timeframe. It reflects the cooperation between United, the FAA, the Airline Pilots Association, the Air Traffic Controllers Association and Airport staff.

Mr. Tryg McCoy, Airport Operations Superintendent, explained that within the last 12 months a number of groups have been working together to resolve the delay issue. During this time this technology became available that we believe will assist us in the short term.

To date, the Airport has reached an agreement with the FAA to purchase a Precision Runway Monitor (PRM), a new technology monitor that will assist Controllers at BAY TRACON who meter the aircraft into San Francisco. This will assist SFO in the short term by increasing the number of flights per hour during the low cloud periods.

The PRM provides a very accurate high speed update of where the aircraft is, and will enable a new flight approach procedure.

When the ceiling or bottom of the clouds is greater than 3,500 feet, we can land two planes simultaneously. When the base of the clouds comes down to 3,500 feet, we can only land one aircraft at a time.

This PRM, and the new approach procedure called the Simultaneous Off-set Instrument Approach, will allow us to pick up a piece of air space so that we can continue to land two aircraft at a time.

We are working to develop a procedure that will allow us to land aircraft simultaneously down to 1,600 feet. Below 1,600 feet there is no gain and we will still have one aircraft arrival.

We have researched weather for the last 45 years and we have found that a 1,900 foot window occurs 10% of the time per year. In essence, we will increase by 10% a year our ability to land aircraft simultaneously. The only way to resolve the issue of single landings below 1,600 feet is to build new runways that will operate independently of one another.

Independent from the PRM project, the National Air Traffic Controllers Association, the Allied Pilots Association, NASA, the FAA, airlines, and Airport staff are continuing to work on the exact procedures that will allow us to take advantage of this technology.



We are hopeful that we will be able to land up to 10 more aircraft per hour in this 1,900 foot window, which will take us up to between 38 and 40 aircraft per hour.

There are five PRMs certified by the FAA in the world. Two are installed in the U.S., one in Minneapolis and St. Louis. Others will be installed in Boston and JFK. Neither of those four cities fly the simultaneous off-set approach, however, they use the PRM to improve safety. While their runways are close together, they are not as close as SFO's 750 foot spacing.

This radar will provide an update of the aircraft's position every second, versus the current technology of every 4.8 seconds. It will also look ahead 10 seconds to determine where the aircraft is going.

Raytheon Systems is a sole source provider. They are the only company that manufactures this system, and it is the only system certified in the United States.

We are very pleased that we were able to work out an agreement with the FAA. This system was not originally designated by Congress to be installed at SFO.

Commissioner Strunsky asked when this will be operational.

Mr. McCoy responded that we hope it will be operational within 14 to 16 months. St. Louis fast tracked this program and did it in 22 months.

He has been working closely with United Airlines and United would like to find a way to do it in 12 months. We are not sure how fast we can do it, but it will get our full attention.

Commissioner Crayton asked who originally was designated to receive this equipment.

Mr. McCoy responded that he did not know, however, the FAA did a cost benefit analysis of what the PRM would do, and the five cities designated for the PRM came back with a very high cost benefit analysis.

Mr. Martin added that one of the reasons we may not have been designated by the FAA is that BAY TRACON is moving to Sacramento in a couple of years and several FAA capital purchases were delayed awaiting the new center to be in operation. In fact, installation of the PRM will not effect that move at all. The PRM will continue to be operational when BAY TRACON moves to Sacramento.

3. Modification No. 10 to Contract No. 5500E - International Terminal General Construction - Tutor-Saliba/Perini/Buckley, A Joint Venture - \$11,986,754

No. 99-0053

Resolution approving Modification No. 10 to Contract 5500E, International Terminal General Construction, with Tutor-Saliba/Perini/ Buckley, A Joint Venture, in the amount of \$11,986,754, for work related to transferred scope, airline



revisions, design changes to facilitate construction, unanticipated conditions, and change impact mitigation. Funding sources are transfers from other Master Plan Budgets, Construction Contingency, and Management Reserve.

Mr. Tom Kardos, Deputy Director, Bureau of Design and Construction explained that this modification is a compilation of negotiated changes comprising scope transfers, changes triggered by the airline-initiated revisions, design drawing coordination issues, unanticipated site conditions and change impact mitigation.

As detailed in your agenda package, the funding sources are the Airport's capital improvement program, transfers from other contracts, contract contingency and management reserve.

All of the changes have been reviewed and approved by the Master Plan Technical Advisory Board. The costs have been included in the cost forecasts presented to the Commission previously in our quarterly reports for 1998. This Commission action formalizes those forecasted changes.

4. Modification No. 1 of Professional Services Agreement, Contract No. 5511 - Boarding Area A Aircraft Apron - John T. Warren and Associates, Inc. - \$207,403

No. 99-0054

Resolution authorizing Modification No. 1 of Professional Service Agreement, Contract No. 5511, with John T. Warren and Associates, Inc. in the amount of \$207,403.

Funding for this Modification will come from bid underrun savings realized for this project. There is no impact on the Master Plan Baseline Budget.

Mr. Kardos explained that this modification covers engineering work associated with changes initiated by Airport Operations and Facilities Operations and Maintenance divisions. The major components of the changes are comprised of raising the apron elevation to minimize demolition work and thereby reduce construction cost; the revision of taxi lane and hardstand paving, addition of lane centerline lighting and aircraft waste disposal system; and, the relocation of underground utilities from the adjacent frontage road.

Funding for this modification will come from bid under-run of the apron contract with no impact to the Master Plan baseline budget.

The MBE/WBE participation of 15%/5% achieved in the base contract will remain unchanged.

Commissioner Strunsky noted that a good part of this cost actually resulted in a





savings to the Airport.

5. Authorization to Issue a Request for Proposals for Development and Implementation of a Public Relations Strategy Leading Up to and Including the Opening of the New International Terminal

No. 99-0055

Mr. Peter Nardoza, Deputy Director for Public Affairs explained that this is the second piece in our plan for the opening of the new International Terminal. Two meetings ago the Commission approved the proposal for the events planner. This RFP is for media relations.

\* \* \*

#### F. ITEMS RELATING TO ADMINISTRATION, OPERATIONS & MAINTENANCE:

Item Nos. 6 through 17 were adopted unanimously.

6. Award Contract 2357B - North Airport Water Service - JMB Construction, Inc. - \$1,143,000

No. 99-0056

Resolution awarding Contract No. 2357B, North Airport Water Service, to JMB Construction, Inc. in the amount of \$1,143,000.

Mr. Ernie Eavis, Deputy Director for Facilities Operations and Maintenance explained that this contract places a third source of water onto the Airport. If one source shuts down, we will continue to be able to back feed the water supply through the Airport and prevent shutdowns.

Eight bids were received. JMB Construction submitted the low bid.

Commissioner Mazzola asked about the protest.

Mr. Eavis explained that a mandatory pre-bid meeting was held. Several contractors called and said that they were caught in traffic and could not meet the mandatory pre-bid meeting. A second meeting was held for those contractors. One of the contractors who attended the first meeting said that a second meeting should not have been held.

Commissioner Crayton asked if M/WBE information is included.

Mr. Eavis responded that a letter from the HRC is in the information before the Commission which states that JMB Construction meets the M/WBE participation.

7. Award of Contract for Strategic Land Assessment and Development Consulting Service - Sedway Group - \$500,000



Mr. Leo Fermin, International Services explained that SFO operates on a highly constrained site and is one of the most vibrant, economic regions in the country. Considering this, staff believes it prudent to proactively plan for the long term efficient and effective use of scarce land to support business activities at the Airport. Staff proposes to develop a long term strategic land assessment plan which would inventory surrounding development plans, assess Airport user needs against expected land development trends, and identify potential courses of action to protect the Airport's interest.

The assessment will also review the feasibility of shifting some support activities to alternative sites in order to insure land is available to support primary aviation needs.

To meet future Airport user needs, we need to know what is being planned outside of the Airport and what may or may not be available for business activity in the Airport vicinity. This long term plan would dovetail with long term facilities plans and would be focused initially from a business perspective.

This type of assessment would identify developing situations such as the dilemma the freight forwarding industry has in South San Francisco where that city's planned use for a number of the sites they currently occupy conflicts with the industry's need for space.

The proposed resolution authorizes award of this contract to the Sedway Group, a consultant specializing in real estate analysis, urban economics, land use planning and property development. They are a San Francisco certified WBE.

8. Rental Structure for the Tenants for the Food and Beverage in the New International Terminal

Mr. Bob Rhoades, Deputy Director, Business and Finance explained that this item seeks approval for the major business terms and qualification requirements for the new International Terminal Food and Beverage Program.

Airport staff and Pacific Gateway Partnership (PGP), our outside consultant, have five separate entities, four of which are being addressed in this package. They have identified a rental structure for quick food service, fast food, casual dining, and snack/coffee. The fifth concept, fine dining, has yet to be identified.

The rent structure is designed to provide reasonable return to both the tenant and



the Airport, while encouraging excellent performance by the food and beverage operators.

The rent structure being proposed is based on what we know of the profit structure of these various types of businesses, as well as the operating costs.

In addition, we are proposing that the tenant and the Airport are protected from the severe vacillations in enplanements and other business situations that may cause financial hardship on either the tenant or, for our purpose, not being able to achieve what we need to achieve.

We are also proposing that the minimum annual guarantee be based on a per dollar per square foot rent structure.

This program is geared to a tiered approach which recognizes that both the operator and the Airport will profit as they excel.

We are proposing that each of the operators have experience in either the ownership or management of a restaurant, or whatever type of facility it is, in three of the last five years. We have also set some benchmarks for the minimum sales that they should have achieved in this period of time.

Commissioner Strunsky noted that we have adequately protected ourselves for termination for business purposes, but asked if we will control quality or cleanliness. Do we have rights in these agreements to take appropriate action, even if they are doing well from a business perspective, but are running an unpleasant establishment?

The agreements themselves contain a number of provisions that address quality control, cleanliness of the facility, and condition of the facility. We have a program in place today where all of the food and beverage facilities are audited on a monthly basis, as well as other tenants, to make sure that they are maintaining their facilities and offering the type of quality service that we expect.

Commissioner Ito noticed that under the previous history requirement, the threshold for bar and casual dining is higher than the requirements for other settings, like quick serve and fast food.

Mr. Rhoades explained that casual dining/bar facility is generally going to be a higher gross sales type of venture. \$1 million is not a significant amount of money in that type of operation.

PGP and staff surveyed all of these different types of businesses and they believe these are reasonable benchmarks. This is actually a mid-point for this type of facility.

Commissioner Crayton wanted opportunities for new entrants to participate at the Airport. We should always look for opportunities for current tenants to rise to another level. She wants assurance that this has been considered.



Mr. Rhoades said that this is structured in a broad range that should appeal to virtually every segment of the food and beverage industry. We have over 500 invitations on the street. We have received about 137 responses. By the end of this month we should have a clear picture of whether we have achieved a broad range of interested parties, both from new entrants as well as those already at the Airport who desire to move to the next plateau. This range should provide that opportunity.

Mr. John Costas, sitting in for Mr. Martin, reminded the Commission that outreach and diversity was a specific condition when Pacific Gateway was hired.

Item Nos. 9, 10 and 11 were called together and adopted unanimously.

9. Award of New International Terminal Newsstand Lease - CalStar Retail, Inc. Minimum Annual Guarantee: \$632,823

No. 99-0059                      Resolution awarding the New International Terminal Newsstand Lease to CalStar Retail, Inc., and directing the Commission Secretary to seek approval from the Board of Supervisors.

Mr. Rhoades explained that three bids were received on November 19, 1998, with The Benjamin Company submitting the highest bid. The third bidder was Warren News and Gifts, Inc. It was determined that the Benjamin Company bid was non responsive. The joint venture paperwork did not qualify, nor did they fully complete the bid document. Staff met with the Benjamin Company to discuss the omissions and errors that occurred and they agreed that they were not responsive.

The second bidder, CalStar, was verified as having met the requirements, and the Human Rights Commission has approved their affirmative action plan.

10. Award of New International Terminal Museum Store Lease - Museum of Modern Art - Minimum Annual Guarantee: \$175,000

No. 99-0060                      Resolution awarding New International Terminal Museum Store Lease to San Francisco Museum of Modern Art (SFMOMA).

Mr. Rhoades said that the San Francisco Museum of Modern Art has met the qualifications for this lease and the Human Rights Commission has determined that they are in compliance with 12B, the Equal Benefits Ordinance.

11. Award of New International Terminal Aviation Store Lease - Host International, Inc. - Minimum Annual Guarantee: \$131,000

No. 99-0061                      Resolution awarding New International Terminal Aviation Store Lease to Host International, Inc.





Mr. Rhoades said that Host meets the requirements for this lease, and the Human Rights Commission has provided provisional compliance for 12B and has approved its affirmative action plan.

Commissioner Strunsky asked how many square feet is in the newsstand lease. In one of the previous items, we were dealing on a minimum rent per square foot.

Mr. Rhoades responded that in the food and beverage arena we have tried to establish a rent structure that is very service/quality of product oriented. In the retail side, it is more a point of how much a business entity believes that an opportunity is worth.

In the past, when we have taken the same approach to food and beverage as we did to retail, we tended to get bids that were inordinately high. The cost of running a food and beverage operation is much higher than a retail operation. We believe that we have suffered from the quality of sales. Retail opportunities are market driven. The entity bidding for that opportunity must assess what they believe the market is and what the market is worth to them. It is a very different approach.

We have three different approaches. We have the tiered rent minimum for food and beverage. We have straight bids for opportunities we believe that are market driven. We have a combination of RFP/bid process for specialty concepts, such as the Museum Store. We try to assess which avenue is best for a particular type of business.

Commissioner Strunsky said that some of the lower numbers applied to fast food, which is more comparable to retail than a dining facility.

Mr. Rhoades responded that when we looked at the food and beverage component, PGP and staff looked at the typical rent structure that a business would be paying in the City. Our objective is a much greater outreach in that arena, particularly because there are very few food and beverage operators who have ventured into an Airport environment. That has been part of the problem historically.

The rent has been structured to street rents in the City. In this particular opportunity, if the retail community showed a lack of interest, we wouldn't get the bids. If it wasn't structured properly, we wouldn't have received any bids for the opportunity.

Mr. Costas asked Commissioner Strunsky what his concern was.

Commissioner Strunsky responded that he had no problem with this, but felt that the other was too low. This is in the hundreds of dollars per square foot. The other is \$40 or \$50 a square foot.

Mr. Rhoades responded that that is a minimum. He agreed that it was a low minimum, but believed that the business would be driven by the percentage rent structure.



Commissioner Strunsky said that we have a long term on that other lease.

12. Reject All Bids for New International Terminal Bookstore Lease

No. 99-0062

Resolution to (1) reject the bids for the New International Terminal Bookstore Lease; (2) approve the re-bid of this Lease as a combined Bookstore/Cafe concept through a Request for Qualifications, Proposals, and Bid process; and (3) authorize staff to conduct an informational meeting.

Mr. Rhoades explained that on November 19, 1998 two bids were received for the bookstore in the new International Terminal. One from the Benjamin Company, and the other from Marchand Books. Both submitted incomplete bids. Additionally, Marchand Books did not meet the joint venture qualifications.

Staff spoke with both parties at great length and they both understood the concerns over what was submitted.

We would like to rebid this as a straight bookstore with a DBE component. We would like to combine the book concept with a cafe concept.

13. Approval of the A/E Selection Panel's Nomination of Architecture/Engineering Consultant for Contract No. 5500T - TGA Architects, Inc.

No. 99-0063

Resolution approving A/E Selection Panel's nomination of TGA Architects, Inc., as the Architecture/Engineering Consultant for Contract 5500T, New Airport Administrative Offices, and authorizing the staff to prepare contracts for the Commission's consideration.

Mr. Kardos explained that from the Commission approved short list of 12 consultants, eight expressed an interest in the performance of architect/engineering services for the new Airport Administrative offices. Of the eight, three firms organized teams for the Airport's evaluation.

The A/E selection panel interviewed the key personnel of each team, appraised their qualifications and considered the reasonableness of the nominated team's proposed fee.

The team nominated for the project is TGA Architects, Inc. with Tommy Sui and Associates, F.W. Associates, Horton-Lees Lighting Design and Thorburn Associates as sub-consultants.

The team committed 24% MBE and 7% WBE subconsultant participation exceeding the City's 5%/0% respective goals.



We will negotiate a lump sum contract and will return to the Commission for approval of the contract.

14. Resolution Amending the First Supplemental Resolution Providing for the Issuance of Not To Exceed \$400,000,000 Aggregate Principal Amount of San Francisco International Airport Subordinate Commercial Paper Notes

No. 99-0064

Mr. Rhoades explained that by Resolution No. 97-0147 the Commission approved the implementation of the Commercial Paper Program providing for the issuance of not-to-exceed \$400 million Commercial Paper notes.

By Resolution No. 99-0024 the Commission approved award of the reimbursement agreement to Societe Generale to take effect on April 14, 1999, which allows them to issue the substitute letter of credit.

Following the Commission's award, Societe Generale announced plans to acquire another bank. As a result, one of the bond rating agencies placed Societe Generale's credit rating under review because the bank that they are acquiring does not have a credit rating as strong as Societe Generale's.

A quirk in the agreement stated that if there was a reduction in the rating of the letter of credit provider, we would not have a letter of credit in place. Not having a letter of credit in place during this short period of time would jeopardize our ability to issue commercial paper.

This amendment removes that particular restriction.

We are currently enjoying the purchase and sale of commercial paper at a better rate than we are even getting on our Airport revenue bonds.

15. Approval of Phase B of Contract No. 3787-B - Industrial Wastewater Treatment Plant Expansion - Consoer Townsend Envirodyne Engineers, Inc. - \$1,480,790

No. 99-0065

Resolution approving Phase-B of Airport Industrial Wastewater Treatment Plant Expansion Project to Consoer Townsend Envirodyne Engineers, Inc. in the amount of \$1,480,790.

Mr. Eavis explained that this resolution approves Phase B of the contract. Phase A was the schematic design. This resolution allows the consultant to move on to bid preparation and construction management of the plant.

Commissioner Strunsky asked if we had a budget for the cost of the work itself.

Mr. Eavis responded that it should be within the \$13 million to \$15 million range.



16. Modification No. 2 to Contract for Year 2000 Project Management - CIBER Network Services, Inc. - \$1,350,000

No. 99-0066

Resolution approving Modification No. 2 to Contract with CIBER Network Services, Inc. in the amount of \$1,350,000 to provide Year 2000 (Y2K) Project Management, Implementation and Testing of Airport Owned Systems.

Ms. Theresa Lee, Deputy Director, Administration explained that the goal of the the Year 2000 readiness program is to have all Airport systems identified, tested and certified Y2K compliant by June 30, 1998.

The Airport has identified and is tracking the progress of over 170 different system projects. These include San Francisco Airport specific systems, government systems, and non-SFO systems. These include FAA instrument landing systems, airline security checkpoint and jet bridge equipment.

This is the second contract modification. This should complete the Y2K program.

We are on an aggressive time frame. This will allow us time to remediate any unforeseen problems that may come up during the testing process.

Commissioner Strunsky asked why we were paying to look over the FAA.

Ms. Lee responded that we are not. We are insuring that their 11 systems are on track.

17. Authorization to Implement the Airport Rapid Resuscitation Early Shock Trial (A.R.R.E.S.T.) Defibrillation Pilot Program and Issue a Request for Proposals

No. 99-0067

Resolution approving the implementation of the Airport Rapid Resuscitation Early Shock Trial Defibrillation Pilot Program and issue a Request for Proposals to procure automatic external defibrillators.

Ms. Lee explained that during the fall of 1998, Airport staff began exploring the possibility of making automatic external defibrillators available at various locations at the Airport

A taskforce was convened to study the issues and propose an implementation plan. After months of meeting with members of the Fire and Police Departments, Emergency Medical Services and the City Attorney and Medical Clinic staff, the recommendation is to move forward on implementing a pilot project.

The pilot project includes the installaiton of automatic defibrillators at all boarding areas and the training of all San Francisco Police Officers at the Airport.





The Committee will continue to look at other appropriate employees that can be trained to use this equipment.

The American Red Cross recently included in their overall CPR training the use of automatic defibrillators.

\* \* \*

G. CONSENT CALENDAR OF ROUTINE ADMINISTRATIVE MATTERS:

Item Nos. 18 through 30 and 32 through 39 were adopted unanimously. Item No. 31 was removed from the calendar.

18. Bid Call - Contract No. 5706A - AirTrain Domestic Terminal Stations

No. 99-0068

Resolution approving the scope, budget and schedule for Contract No. 5706A, AirTrain Domestic Terminal Stations, and authorizing the Airport Director to call for bids when ready.

This activity is within the scope of the San Francisco International Airport Master Plan Program, which was approved by the Airport Commission on November 3, 1992. The Program EIR prepared for the Master Plan adequately describes this activity and its potential environmental impacts for purposes of the California Environmental Quality Act (CEQA).

19. Modification No. 5 of Professional Services Agreement - Contract No. 5510 - New Boarding Area A - Gerson/Oversheet, Architects, Inc. - \$750,000

No. 99-0069

Resolution authorizing Modification No. 5 of Professional Service Agreement, Contract 5510, with Gerson/Oversheet, Architects, Inc. in the amount of \$750,000.

Funding for this Modification will be provided by the Airport's Capital Improvement Program (CIP) Budget with no change to the Master Plan Baseline Budget.

20. Modification No. 5 to Professional Services Contract for Administrative Construction Management Services - Luster/GKO, A Joint Venture - \$750,000

No. 99-0070

Resolution approving Modification No. 5 to Contract with Luster/GKO in the amount of



\$750,000 to provide administrative support services for the development of the Runway Reconfiguration Program.

Funding source for this Modification will be the Airport's Capital Improvement Program budget with no impact on the Master Plan Baseline Budget.

21. Modification No. 5 to Contract No. 5515.3 - Holmes & Narver/CDI - \$305,210

No. 99-0071

Resolution authorizing Modification No. 5 Holmes & Narver/CDI Contract 5515.3 to provide consulting services from CDI to support coordination between the new International Terminal operations team and the 5515.C project team; provide operational procedures and manuals for the airports cable infrastructure; and coordinate airline and concession tenant wiring requirements by updating existing documentation and procedures for 58 Tenant Wire Closet (TWC) rooms in the New International Terminal.

22. Authorization to Enter into Dealer Agreements in Connection with the Commission's Commercial Paper Program

No. 99-0072

Resolution authorizing Airport Staff to enter into agreements with investment banking companies to provide underwriting services for the sale of Commercial Paper on behalf of the Commission.

23. Award of Contract No. 4055 - As Needed General Construction - Resource and Design, Inc. - \$332,515

No. 99-0073

Resolution awarding Contract No. 4055, As-Needed General Construction to Resource and Design, Inc. in the amount of \$332,515.

Commissioner Strunsky asked Mr. Eavis if he has met with the contractor about this bid. It is significantly lower than the other bids.

Mr. Eavis responded that staff has spoken with the contractor and they are comfortable with the bid. They have worked on a number of projects in the last couple of years and they are ready to move ahead.



24. Modification No. 3 of Contract No. 3471 - ARINC - \$451,000
- No. 99-0074                      Resolution authorizing Modification No. 3 of ARINC Contract No. 3471 in the amount of \$451,000 for the MUSE Year 2000 upgrade.
25. Modification No. 1 to Professional Services Contract with URS/Greiner Woodard Clyde
- No. 99-0075                      Resolution approving Modification No. 1 to Professional Services Contract with URS/Greiner Woodard Clyde in the amount of \$220,000.
26. Reject All Bids - Contract 3996A - Multi-Modal Transportation Center - Phase A
- No. 99-0076                      Resolution to reject all bids for Contract 3996A, Multi-Modal Transportation Center - Phase A, and authorize the Director to re-bid the contract when ready.
27. Bid Call - Contract No. 4116 - Airport Facilities Fire Protection Improvement
- No. 99-0077                      Resolution approving the scope, budget, and schedule and authorizing the Director to call for bids when ready.
28. Bid Call - Contract No. 4117 - Airport Facilities HVAC Improvement
- No. 99-0078                      Resolution approving the scope, budget, and schedule and authorizing the Director to call for bids when ready.
29. Bid Call - Contract No. 3979 - Bayfront Park Improvement
- No. 99-0079                      Resolution approving the scope, budget, and schedule for Contract No. 3979, Bayfront Park Improvement, and authorizing the Airport Director to call for bids when ready.
30. Bid Call - Contract No. 4021 - Terminal Upper Level Viaduct - Concrete Repair
- No. 99-0080                      Resolution approving the scope, budget, and schedule for Contract 4021, Terminal Upper



Level Viaduct - Concrete Repair, and authorizing the Director to call for bids when ready.

31. Authorization to Hold a Pre Bid Conference -New International Terminal Candy Store Lease

No. 99-0081

32. Rental Credit to Host International, Inc. in an Amount Not-To-Exceed \$22,200 for the Reimbursement of Utility Improvements

No. 99-0082

Resolution approving a rental credit to Host International, Inc. for providing utilities to the new coffee cart in the new Rental Car Facility in an amount not-to-exceed of \$22,200.

33. Rental Credit to Northwest Airlines for Relocation of its Podiums at Gates 43, 45, and 47 in Boarding Area C of the South Terminal in an Amount Not-to-Exceed \$39,000

No. 99-0083

34. Exercise of Second One-Year Extension for the North Terminal Newsstand Lease

No. 99-0084

Resolution approving the second one-year extension of Aarons' Concessions, Inc.'s North Terminal Newsstand Lease.

35. AMPCO System Parking Agreement - Exercise Third One-Year Option

No. 99-0085

Resolution approving exercise of third option of AMPCO System Parking's Agreement.

Mr. Barry Toronto, United Taxicab Workers, said that he has not had the opportunity to look at the contract, but believed that it included oversight of taxi dispatching operations. He hoped that he could provide input that would improve service to the public and taxi drivers as well.

Provisions should be made in the contract to monitor the taxi dispatching operations.

Mr. Rhoades responded that this is a simply an extension of the existing contract.

Mr. Edwin Leung, Assistant Deputy Director, Landside Operations added that the





AMPCO contract will cover this service until around July when the Commission approves a contract for taxi dispatching.

Commissioner Strunsky asked how much the management fee is.

Mr. Rhoades responded that last year it was \$500,000, and that included the taxi dispatching service.

Commissioner Strunsky asked if we will be credited for that service when it is removed from the AMPCO contract?

Mr. Rhoades responded that the management fee is made up of the manager of the garage as well as the senior staff. The operating budget will be reduced according to that particular service.

Commissioner Strunsky said that their scope of service will be reduced as well.

Mr. Rhoades responded that he did not believe that they were management service driven.

Mr. Costas responded that staff will take a look at the contract and respond to the Commission in writing.

36. Rental Credit to Auto Symphony for the Reimbursement of Premises Relocation

No. 99-0086	Resolution approving a rental credit to Auto Symphony for expenses associated with the relocation of its premises in the North Terminal in an amount not-to-exceed \$14,043.40.
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37. Re-Issuance of the Request for Proposals for the Shoeshine Service Lease to Expand the Opportunity

No. 99-0087	Resolution authorizing staff to re-issue the Request for Proposals for the Shoeshine Service Lease, with less restrictive qualification requirements.
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38. Renew Agreement with Pacific States Airline Services, Inc. (PSAS) to Provide Baggage Handling Services

No. 99-0088	Resolution renewing the agreement with Pacific State Airline Services, Inc. (PSAS), commencing June 1, 1999 through May 31, 2000, with a budget not to exceed \$300,000.
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39. Contract with the Corporation of The Fine Arts Museums of San Francisco \$250,000

No. 99-0089

Resolution approving contract for \$250,000 with the Corporation of the Fine Arts Museums (CoFAM) of San Francisco for the purpose of providing and implementing temporary exhibitions at the San Francisco International Airport for the period July 1, 1999 to June 30, 2000.

Commissioner Strunsky asked when we will receive our accreditation.

Mr. Martin responded that he met with the accreditation team last week, as did a number of Airport staff. They took an extensive tour of the Airport facilities and the Museum Department. He hopes that accreditation will be forthcoming.

\* \* \*

H. PUBLIC HEARING:

The public hearing began at 10:05 AM and concluded at 10:10 AM, there being no requests from the public to speak. Item No. 40 was adopted unanimously.

40. Amendment to Airport Commission's Rules & Regulations Allowing for a Monetary Fine Against Individuals for Tailgating

No. 99-0090

Hearing to adopt the amended Airport Commission Rules & Regulations pertaining to Airport Security allowing for a monetary fine against individuals for tailgating.

Mr. Ron Driscoll, Associate Deputy Director explained that this amendment increases the monetary fine for tailgating which is a process under our present Rules and Regulations where any employee who wants to enter the Airfield Operations Area (AOA) must swipe their identification card through a card reader, as well as subject their hand to a palm reader. Tailgating is when an authorized employee goes through the door and allows someone to go through the door behind them without using the technology that provides that authorization.

FAA testing throughout the United States indicates that enhancements and improvements in this area are necessary. We are implementing measures to help us deal with this problem and hope that this fine will assist us. On the advice of the FAA, we are implementing a measure that will only subject gross violators to a fine. We will also limit doors that allow access to the AOA, and will monitor those limited doors to insure that tailgating does not occur.

We believe that these measures will enhance our security program and will be acceptable to the FAA.



Commissioner Mazzola asked how many languages these notices will be provided in.

Mr. Driscoll responded that the notices will be in Spanish, Chinese and Tagalog.

\* \* \*

## I. NEW BUSINESS:

This is the "Public Comment" section of the calendar. Individuals may address the Commission on any topic within the jurisdiction of the Airport Commission for a period of up to three (3) minutes. Please fill out a "Request to Speak" form located on the table inside the entrance to Room 428 and submit it to the Commission Secretary.

Mr. Barry Toronto, United Taxicab Workers, said that all is not well at SFIA. The adjustments being made for construction are not meeting the customers needs.

Extra staff must be placed downstairs when areas are closed upstairs. The lower level is a mess because there is no Police presence after 11:00 PM. The good news is that everyone is kept in the inner two lanes, while cabs and buses get the outer lanes. That is a major improvement implemented by Landside Operations. However, limousines and gypsy vehicles are still stealing passengers and soliciting in the inside lanes because there are no PSAs around.

A strong message must be sent to the Police Department for extra staffing during construction.

He has a confirmation from John Martin that for the next two or three months the upstairs lanes will be closed for construction after 11:00 PM.

Monday night there were a lot of delayed flights due to weather conditions across the country and in San Francisco. Monday night worked because everyone used their cell phone to notify people. Last night the taxi starter told drivers that 9,000 people were coming in between 10:00 PM and midnight. He arrived at the Airport at 11:10 PM and did not get out of the Airport with a passenger until 12:20 AM. That's how many cabs were at the Airport.

There needs to be one source of information so that their time is not wasted and the City is not depleted of taxis. They get taxis to the Airport during peak periods by cell phones and dispatch services, rather than by taxi starters who provide incorrect information.

A number of problems with AMPCO have been written up, but no response to these complaints have been received from AMPCO. Landside Operations provides a response, but AMPCO should be responding as well.

Recently a taxi starter put a San Francisco passenger in a non-San Francisco cab.

He was recently written up with a bogus complaint. Lt. Shotz of the Police Department met with him yesterday and realized just how bogus the complaint was. He is now



being singled out, along with another driver who attended a hearing a couple of weeks ago to complain about the restrooms. AMPCO is targeting them. They want it to stop. They request that AMPCO not receive the contract when it comes up for renewal.

Commissioner Mazzola asked that Mr. Toronto copy Landside when he writes AMPCO.

Mr. Toronto responded that he does.

\* \* \*

J. CORRESPONDENCE:

There was no discussion by the Commission.

\* \* \*

K. CLOSED SESSION:

Discussion and vote pursuant to Sunshine Ordinance Section 67.11 on whether to conduct a Closed Session.

The Director determined that it was not necessary to go into closed session.

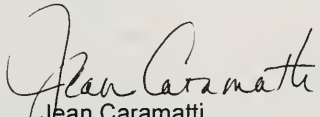
The Airport Commission will go into closed session in accordance with Government Code Section 54956.9(b)(1) to confer with legal counsel regarding potential litigation.

Discussion and vote pursuant to Brown Act Section 54957.1 and Sunshine Ordinance Section 67.14 on whether to disclose action taken or discussions held in Closed Session.

\* \* \*

L. ADJOURNMENT:

There being no further calendared business before the Commission, the meeting adjourned at 10:15 AM.

  
Jean Caramatti  
Commission Secretary





# SAN FRANCISCO AIRPORT COMMISSION



## MINUTES

April 6, 1999  
9:00 A.M.

✈ ROOM 400 - CITY HALL  
400 VAN NESS AVENUE  
CITY AND COUNTY OF SAN FRANCISCO

WILLIE L. BROWN, JR., MAYOR

## COMMISSIONERS

HENRY E. BERMAN  
President

LARRY MAZZOLA  
Vice President

MICHAEL S. STRUNSKY

LINDA S. CRAYTON

CARYL ITO

JOHN L. MARTIN  
Airport Director

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Minutes of the Airport Commission Meeting of  
April 6, 1999

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9.	Award of Professional Services Contract - Expert Aircraft Noise Event Analysis - Harris Miller, Miller & Hanson, Inc.	99-0099	10
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# AIRPORT COMMISSION MEETING MINUTES

April 6, 1999

## A. CALL TO ORDER:

The regular meeting of the Airport Commission was called to order at 9:02 AM in Room 400, City Hall, San Francisco, CA.

\* \* \*

## B. ROLL CALL:

Present: Hon. Larry Mazzola, Vice President  
Hon. Michael S. Strunsky  
Hon. Linda S. Crayton  
Hon. Caryl Ito

Absent: Hon. Henry E. Berman, President

\* \* \*

## C. ADOPTION OF MINUTES:

The minutes of the regular meetings of February 2, 1999 and February 16, 1999 were adopted unanimously.

No. 99-0090

\* \* \*

## D. ITEMS INITIATED BY COMMISSIONERS:

There were no items initiated by Commissioners.

\* \* \*

## E. POLICY:

Item No. 1 was adopted unanimously.

### 1. Telecommunications Infrastructure Policy

No. 99-0091 Resolution approving an Airport Telecommunications policy to address and formalize the Airport's role and responsibilities for on-Airport telecommunications infrastructure.

Ms. Theresa Lee, Deputy Director, Administration explained that the resolution before the Commission formally adopts a Telecommunications Infrastructure Policy as a next step in formally addressing the Airport's changing role and





responsibility for telecommunications on Airport property. This policy will affirm the Airport's commitment to accepting its responsibilities as landlord and landowner of the Airport property for telecommunications infrastructure and facilities that connect telecommunication providers with Airport and tenant telecommunications systems.

The policy also sets forth general provisions for identification, permitting, oversight, management and control of telecommunications infrastructure use, installation and maintenance, and directs staff to develop more detailed protocols, procedures, terms and conditions governing the use of such infrastructure, including reasonable non-discriminatory rates and charges and rules and regulations for the Commission's consideration.

Commissioner Strunsky asked if this will require staffing a new department?

Ms. Lee responded that we will enhance our current staffing. We currently have a telecommunications unit that responds to Commission employees needs and oversees the courtesy phones.

Commissioner Strunsky asked if this will provide good cell phone coverage throughout.

Ms. Lee responded that it will.

Mr. Martin responded that we are close to finalizing an agreement with cellular phone operators to expand their systems on the Airport. There are presently several dead areas on the Airport.

Commissioner Crayton said that she was interested in the section referring to "Rights of Way".

Ms. Gretchen Nicholson, Deputy City Attorney explained that under the old telecommunications situation, there was only one telephone communicator that came on to any private property and did not have to make arrangements with the property owner. Since there has been a break up of the telephone industry, the property owner of contiguous property is responsible for all of the connecting infrastructure between where the telephone company first comes on to the property and where it connects with the customer. We are responsible for all of that.

In the past, Pacific Bell, who was the main provider, could come onto Airport property, go wherever they wanted to go and make private arrangements with the tenants and the Airport would know nothing about it. The Airport would assign them ductbanks.

The Airport now has a responsibility for all of the connections. We are trying to catch up by finding out what is already there, where the rights of way really are, and assign them appropriately.

There is also a move to consolidate the rights of way. We want to know where



they are so that during periods of construction we don't break utility connections.

Commissioner Strunsky hoped that this group would keep their eye on local telephone and price them as if the Airport were in San Francisco.

\* \* \*

F. ITEMS RELATING TO MASTER PLAN PROJECTS:

Item No. 2 was adopted unanimously.

2. Modification No. 11 to Contract No. 5500E - International Terminal General Construction - Tutor-Saliba/Perini/Buckley, A Joint Venture - \$10,625,830

No. 99-0092	Resolution approving Modification No. 11 to Contract 5500E, International Terminal General Construction, with Tutor-Saliba/Perini/ Buckley, A Joint Venture, in the amount of \$10,625,830, for work related to Airline revisions, design changes to facilitate construction, unanticipated conditions and change impact mitigation. Funding sources are construction contingency, current budget and Management Reserve.
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Mr. Tom Kardos, Deputy Director, Bureau of Design and Construction explained that this modification is a compilation of negotiated changes comprising changes triggered by the airline-initiated revisions, design drawing coordination issues, unanticipated site conditions and change impact mitigation.

As detailed in your agenda package, the funding sources are the contract's current budget, contract contingency and management reserve.

All of the changes have been reviewed and approved by the Master Plan Technical Advisory Board. The costs have been included in the cost forecasts presented to the Commission previously in our quarterly reports during the 1998 calendar year. This Commission action formalizes those forecasted changes.

\* \* \*

G. ITEMS RELATING TO ADMINISTRATION, OPERATIONS & MAINTENANCE:

Item Nos. 3 through 6 were adopted unanimously.

3. Award of Contract No. 4034 - Solid Waste Compactor Improvements and Waste Management - South San Francisco Scavenger Company - \$5,877,991.60

No. 99-0093	Resolution awarding Contract 4034, Solid Waste Compactor Improvements and Waste Management to So. San Francisco Scavenger Co. in the amount not to exceed \$5,877,991.60.
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Mr. Ernie Eavis, Deputy Director, Facilities Operations and Maintenance explained that the contract before the Commission will install and service five solid waste compactors and recycling bins, plus nine new compactors that will be installed as part of the Master Plan.

We will also replace two existing concrete compactor pads, and two concrete compactor pads will be repaired. We will also purchase and install 80 foreign object debris (FOD) containers for placement in and around gates on the airfield.

The engineers estimate was \$350,000 for installation of the equipment, and \$1.2 million for five years for the solid waste disposal.

The low bidder was So. San Francisco Scavenger Company.

Commissioner Strunsky asked if this company has worked for the Airport prior to this.

Mr. Eavis responded that they currently have the contract.

Commissioner Crayton asked why it was necessary to obtain a waiver.

Mr. Eavis responded that the part of the contract eligible for subcontracting was less than one half percent of the contract amount. However, the company did subcontract 25% of Phase A, which covers installation, to an MBE and 5% to a WBE.

Commissioner Ito noted that the resolution requests an additional \$140,000 to the budget for modifications and asked if delays or obstacles were anticipated.

Mr. Eavis responded that that is standard language in resolutions to avoid having to return to the Commission for additional funding. He does not foresee using that money.

4. Approval of Lease of Off-Airport Office/Warehouse Space to Accommodate Airport Staff and to Warehouse Attic Stock

No. 99-0094

Resolution approving the City's lease of office/warehouse space at 245 So. Spruce Avenue, South San Francisco, consisting of approximately 562,818 square feet for a total initial annual rent of \$5,320,632 for a period of ten years with two five-year options, between South City Industrial Company, LLC as lessor and the City and County of San Francisco, acting by and through its Airport Commission, as lessee.

Mr. Bob Rhoades, Deputy Director, Business and Finance explained that with the growing demand for office space and the lack of available space on the Airport, staff, in conjunction with the City's Real Estate Department, have been



looking for suitable space off Airport since the latter part of 1998. This additional space is needed to house the Runway Development team and a portion of our Personnel Department. In addition, because the Master Plan is increasing the size of our buildings from 6 million square feet to 18 million square feet, we have run out of room for our trades (sheetmetal, carpentry, landscaping, etc.).

We have been looking for space to warehouse our attic stock to maintain the facilities of the new complex, as well as office space. Because the Peninsula is experiencing an economic boom, we have had a difficult time finding appropriate space. However, a building has been found on So. Spruce Avenue in So. San Francisco, just off of El Camino Real and approximately 6 minutes from the Airport that meets both needs.

The warehouse space is approximately 516,000 square feet. This is an ideal building for the trades and the storage of materials for the new complex. In addition to the warehousing space, there is approximately 45,860 square feet of office space. This space is in good shape and could be renovated fairly inexpensively. It could accommodate our Runway team, our EEO Unit, our Personnel Unit who will be handling the Master Plan hiring, as well as our Exam Unit.

Once these groups are relocated we will still have between 10,000 and 12,000 square feet available for future growth.

This property is also very desirable because the office space itself is at a gross rate of \$1.25 per square foot. The average now on the Peninsula is somewhere between \$2.50 and \$3.25 per square foot. The warehouse space is 75 cents per square foot, which is market rate.

Over the term of the contract we will be providing the landlord with a credit up front for some of the improvements, beyond those required for ADA compliance. However, we will receive re-payment of those monies at approximately 7.5% interest over the term of the contract.

Commissioner Strunsky asked if our engineers examined this building for current seismic requirements.

Mr. Eavis responded that some work is necessary, but it is very minor. We will be able to move in very quickly.

Mr. Martin said that the owner of the building gave him a tour last week and explained that the permits were just obtained for the seismic work. The owner identified the necessary seismic work and said that he would do the work.

Commissioner Ito asked what the timeline was for consolidation of other off-site space.

Mr. Rhoades responded that he is planning to occupy a portion of this property on May 1, 1999, contingent upon completion of the necessary improvements. We have sufficient time in the other location to cover any slippage in the renovation.





Item No. 5 was put over.

5. Authorization to Conduct Pre-Qualification Process Airport Employee Parking Facilities Operating Agreement

Resolution authorizing staff to conduct the pre-qualification process for the Airport Employee Parking Facilities Agreement, a Small Business Enterprise Set-Aside.

Mr. Rhoades explained that this item seeks authorization for the pre-qualification process for the employee parking facilities operating agreement.

This agreement has been structured to be taken out of the current garage operator's contract in order to provide opportunities for disadvantaged business enterprises operating smaller facilities in the nine Bay Area counties.

This particular agreement is similar to the existing garage. It is a one year contract with four-one year options. The minimum qualification is that the proposers cannot be operating or managing a garage in the Bay Area that grosses more than \$5 million. Our objective in making that cap is to insure that we attract smaller operators.

The proposers must also have operated or managed a garage with a minimum of 1,500 stalls.

The on-Airport employee parking facilities will include approximately 7,700 stalls, once the Plot 7 garage opens. The current Lot DD garage generates approximately \$5-million a year in fees.

Ms. Jacqueline Besser commended the Airport Director and staff for making the effort to do the small business set aside and for taking some of the recommendations made at the pre-bid conference into consideration.

She noted that if the Airport was making an attempt to attract small businesses, it should take into consideration that most City contracts involving a joint venture will take the experience of the entity as a whole rather than requiring the same experience of each member of the joint venture. That would preclude some small businesses from participation. She asked the Commission to take this into consideration.

Commissioner Strunsky asked Ms. Besser if she was suggesting that both joint venture partners must have some experience, however, one of the partners could be new to this type of business.

Ms. Besser said that she was. She explained that what normally happens in City contracts is that the overall partnership is looked at and as long as the overall partnership meets the requirement, it's okay. She was not suggesting that a joint venture partner shouldn't have any experience. They should have some of the minimum requirements, however, some of the financial considerations and



experience should be looked at again.

Commissioner Strunsky asked Ms. Besser if she was satisfied with the partnership requirement of 51%/49%.

Ms. Besser responded that she did not have a problem with the percentages.

Commissioner Strunsky said that there appears to be a difference in requirements for a 50/50 partnership and a 51/49 partnership.

Ms. Besser believed that the attempt was to have the small business take the lead. She was concerned about the requirements, not the percentages..

Commissioner Crayton assumed that Ms. Besser was trying to argue the point that new entrants will never have the opportunity to participate if they are required to have the experience up front.

Ms. Besser agreed.

Mr. Rhoades explained that at the 50/50 level we were asking for the same experience. However, on the 51/49 level, the junior partner can have far less experience. There is no gross revenue requirement for the junior partner, and they don't need garage management experience of more than 500 stalls. We did require five years of experience in some management capacity for the junior partner.

Our primary objective was to try to grow the smaller garage operators in the Bay Area into a larger scenario from a business point of view. We also wanted to insure that we maintained a first class employee garage operation. The Lot DD structure is a fairly large, complex building that we felt would require some level of experience on the part of both partners.

Commissioner Strunsky felt that this was unusual.

Mr. Martin suggested holding this item over for two weeks in order to provide the opportunity to look at the practices of other City departments, in particular the Department of Parking and Traffic.

## 6. Adoption of Proposed Airport Street Names

No. 99-0096                      Resolution adopting new street names for existing and new Airport roads being constructed as part of the Master Plan expansion.

Mr. Martin said that this resolution will rename the Airport roads by functional name.

One road was named for former Airport Commissioner Bill McDonnell, and that name will be retained for that roadway.



H. CONSENT CALENDAR OF ROUTINE ADMINISTRATIVE MATTERS:

Item No. 16 was removed from the calendar. Commissioner Crayton was unanimously recused from voting on Item No. 13 due to a conflict of interest. Item Nos. 7 through 15 and No. 17 were adopted unanimously.

7. Modification No. 4 to Professional Services Contract No. 5503 - Geotechnical Engineering Services - International Terminal Complex - PSC Associates, Inc. - \$103,080

No. 99-0097

Resolution authorizing Modification No. 4 to PSC Associate, Inc. professional services agreement in the amount of \$103,080.

Funding for this Modification will be provided by a transfer of funds from Contract No. 5601.H, Utility Relocations, with no impact on the Master Plan Baseline Budget.

8. Award Contract 4033 - On-Call Pavement Overlay and Reconstruction - 1998/99 - Interstate/MH, A Joint Venture - \$820,000

No. 99-0098

Resolution awarding Contract 4033, On-call Pavement Overlay and Reconstruction - 1998/99, to Interstate/MH, A Joint Venture in the amount of \$820,000.

9. Award of Professional Services Contract - Exper Aircraft Noise Event Analysis Harris Miller, Miller & Hanson Inc. - \$250,000

No. 99-0099

Resolution authorizing a Professional Services Contract with Harris Miller, Miller & Hanson Inc. to provide expert aircraft noise event analysis in support of the Airport's noise mitigation efforts - \$250,000.

10. Award of Professional Services Agreement for Environmental Consulting Services - LSA Associates, Inc. - \$280,000

No. 99-0100

Resolution approving Professional Services Agreement for \$280,000 with LSA Associates, Inc. to provide environmental consulting services and secure resource agency approvals for Airport projects.



11. Modification No. 1 to Agreement for Airport Security Consulting Services  
George G. Teebay - \$150,000

No. 99-0101

Resolution approving Modification No. 1 to the agreement with George G. Teebay for airport security consulting services in the amount of \$150,000 increasing the total contract amount from \$49,000 to \$199,000 starting July 1, 1999 through June 30, 2002.

12. Modification to Professional Legal Services Agreement (Noise/Environmental Contract) with Morrison & Foerster - \$500,000

No. 99-0102

Resolution approving Modification to Professional Legal Services Agreement (Noise/Environmental contract) with Morrison & Foerster to increase compensation by the amount of \$500,000; all other terms and conditions of the contract to remain in full force and effect.

Commissioner Crayton asked why can't we use the services of other firms?

Ms. Mara Rosales, Airport General Counsel responded that Morrison and Foerster primarily does environmental work. We have other firms on contract, and we have a request for qualifications out. We are interviewing for additional firms in that area with respect to the runway project.

Morrison and Foerster also does work in connection with aviation matters. We also have two additional firms on the East Coast on contract for services in that field.

We try not to have one firm in any one area, but prefer to diversify both in terms of the size and the make up of the firm so that we have an array of legal service providers.

We have approximately 20 law firms on retainer and not one of them does exclusively Airport business.

Commissioner Crayton was unanimously recused from voting on Item No. 13 due to a conflict of interest.

13. Modification to Legal Services Agreement with Hanson, Bridgett, Marcus, Vlahos & Rudy Relating to Labor and Employment Law Matters - \$150,000

No. 99-0103

Resolution approving Modification to Legal Services Agreement with Hanson, Bridgett, Marcus, Vlahos & Rudy to increase funding by the amount of \$150,000. July 1, 1999 through





June 30, 2002.

14. Modification to Professional Legal Services Agreement with Law Firm of Richard H. Jordan - \$45,000

No. 99-0104

15. Reimbursement to San Francisco Foreign Flag Carriers (SFFFC) for Providing Additional Security Guard Staffing to the Airport - \$410,000

No. 99-0105

Resolution authorizing reimbursement to San Francisco Foreign Flag Carriers for providing additional security guard staffing at eight (8) airfield access doors in the Airport.

Commissioner Strunsky noted that the Commission recently approved a resolution which authorized a fine for tailgating. Why are we doing this?

Mr. Martin responded that we are being extra cautious. It is very unlikely, given that there will be security guards at the doors, that tailgating will occur. The \$50 fine is not enough of a disincentive.

Item No. 16 was removed from the calendar.

16. Acquisition of A Rare Book Collection for the San Francisco Airport Museums (SFO Museums) Aviation Library

Resolution approving the acquisition of a Rare Book Collection for the San Francisco Airport Aviation Library, Archive and Museum at an acquisition cost of \$200,000.

17. Grant Application for Spur Trail

No. 99-0106

Resolution authorizing staff to apply for a \$100,000 California Coastal Conservancy grant to fund a portion of the proposed North Access Road Spur Trail.

\* \* \*

#### I. NEW BUSINESS:

This is the "Public Comment" section of the calendar. Individuals may address the Commission on any topic within the jurisdiction of the Airport Commission for a period of up to three (3) minutes. Please fill out a "Request to Speak" form located on the table



inside the entrance to Room 428 and submit it to the Commission Secretary.

There were no requests from the public to speak.

\* \* \*

J. CORRESPONDENCE:

There was no discussion by the Commission.

\* \* \*

K. CLOSED SESSION:

Discussion and vote pursuant to Sunshine Ordinance Section 67.11 on whether to conduct a Closed Session.

The Commission voted unanimously to go into closed session. The public meeting was recessed at 9:35 AM and the closed session was convened.

The Airport Commission will go into closed session in accordance with Government Code Section 54956.9(b)(1) regarding potential litigation.

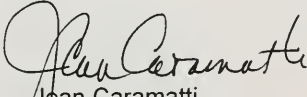
Discussion and vote pursuant to Brown Act Section 54957.1 and Sunshine Ordinance Section 67.14 on whether to disclose action taken or discussions held in Closed Session.

The Commission reconvened its meeting at 9:45 AM. The Commission determined that it was not in the public interest to disclose the nature of the closed session and voted unanimously not to disclose it.

\* \* \*

L. ADJOURNMENT:

There being no further calendared business before the Commission, the meeting adjourned at 9:47AM.

  
Jean Caramatti  
Commission Secretary



# SAN FRANCISCO AIRPORT COMMISSION

JG-14-99A11:30 RCVD



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## MINUTES

April 20, 1999

9:00 A.M.

 ROOM 400 - CITY HALL  
400 VAN NESS AVENUE  
CITY AND COUNTY OF SAN FRANCISCO

WILLIE L. BROWN, JR., MAYOR

## COMMISSIONERS

HENRY E. BERMAN  
President

LARRY MAZZOLA  
Vice President

MICHAEL S. STRUNSKY

LINDA S. CRAYTON

CARYL ITO

JOHN L. MARTIN  
Airport Director

SAN FRANCISCO INTERNATIONAL AIRPORT  
SAN FRANCISCO, CALIFORNIA 94128

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Minutes of the Airport Commission Meeting of  
April 20, 1999

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8.	Acquisition of a Rare Book Collection for the SFO Airport Museums Aviation Library	99-0113	7
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12.	Airport Shuttle Bus Service Agreement	99-0117	8
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# AIRPORT COMMISSION MEETING MINUTES

April 20, 1999

## A. CALL TO ORDER:

The regular meeting of the Airport Commission was called to order at 9:05 AM in Room 400, City Hall, San Francisco, CA.

\* \* \*

## B. ROLL CALL:

Present: Hon. Henry E. Berman, President  
Hon. Michael S. Strunsky  
Hon. Linda S. Crayton  
Hon. Caryl Ito

Absent: Hon. Larry Mazzola, Vice President

\* \* \*

## C. ADOPTION OF MINUTES:

The minutes of the regular meeting of March 19, 1999 were adopted unanimously.

No. 99-0129

\* \* \*

## D. DIRECTOR'S REPORTS:

### 1. Master Plan Quarterly Update

Report on the status of the Master Plan Projects as of March 15, 1999, in accordance with the Baseline Budget and Schedule.

Mr. Tom Kardos, Deputy Director, Bureau of Design and Construction explained that through the first quarter of 1999 the Airport awarded \$2.210 billion, or 93% of the program budget excluding allowable contingency and management reserve. In terms of construction only, a total of \$1.757 billion, or 91% of the budget has been awarded through the reporting period. New construction contract awards during the last quarter totaled \$42 million. Total contract awards during this quarter amounted to \$62 million, including contract modifications in both construction and professional services.

Over the next six months we anticipate awarding approximately \$39 million in construction contracts. The total awarded percentages will reach 95% of the program budget, or 93% of the construction budget, both excluding allowable



contingency and management reserve.

Invoices approved since the last report totaled \$146 million, bringing the total invoiced amount to \$1.661 billion or 63% of the total current budget including management reserve. This invoiced total is composed of \$1.300 billion for construction, \$182 million for design, \$113 million for construction management (CM), \$11 million for testing, \$24 million for OCIP, \$26 million for Airport Administration, and \$4 million for Art Enrichment.

Contingency usage to date is \$117 million or 79% of the \$147 million baseline budget compared to a completion level of 67% based on approved construction invoices. The current management reserve budget is \$97 million, a \$11 decrease from the previous report primarily due to airline initiated revisions, AirTrain stations contract award, and ITB design. The current forecast for the management reserve budget at completion is \$78 million, a \$10 million decrease reflecting the changes mentioned relative to the current management reserve budget.

Negotiations covering the cost impact of inefficiencies and acceleration resulting from the introduction of major changes to the International Terminal and claimed by the contractor, are being finalized. The cost impact of the potential settlement is not reflected in our current forecast.

The total program reached 68% completion with 87% design completion and 67% construction completion.

The International Terminal is 83% complete, with work continuing to complete the roofing, electrical rooms and ceiling installation in the shoulder buildings. Boarding Areas A and G are proceeding for a fourth quarter 1999 and third quarter 1999 respective completion. The baggage handling system is 53% complete.

The elevated circulation roadways are 70% complete, the inbound/outbound ramps are 59% complete with substantial completion scheduled for December 1999 for the roadways and April 2000 for the ramps.

The AirTrain Guideway contracts are running behind schedule, consuming the float between Guideway and System contracts. The Operating System contract is in its design phase. We are concentrating on the validation process of the Train Control system which consumed seven of the nine month float. Full passenger service remains scheduled for December 15, 2001.

Tenant Improvement programming and schematic phases have commenced. The first airline tenant access date is August 25, 1999 in Boarding Area G. In the International Terminal building, the first tenant build out access is forecast for October 8, 1999 on levels two and four.

The three Securities and Special Systems contracts continued installation of the Access Control System, CCTV in the boarding areas and installation of equipment in the International Terminal Complex.

In the area of job safety, our actual rate of 11.5 for recordable incidents is slightly



higher than the national average and remained unchanged compared to our last report. Our lost time incident rate of 2.98 is slightly above our goal of 2.45, also unchanged compared to the third quarter of 1998. The MBE/WBE participation is 23%/5% respectively on the program level. A breakdown by the major sub-areas is presented in the report.

In summary, the Master Plan Implementation Program is proceeding on the basis of selective work acceleration to meet the scheduled completion date while remaining within the baseline budget.

\* \* \*

E. ITEMS INITIATED BY COMMISSIONERS:

There were no items initiated by Commissioners.

\* \* \*

F. ITEMS RELATING TO MASTER PLAN PROJECTS:

Item No. 2 was adopted unanimously.

2. Resolution Regarding the Sale of Airport Revenue Bonds, Issue 23 and the Delegation of Authority to the Airport Director within Certain Parameters Established by the Commission

No. 99-0107

Resolution regarding the sale of \$250 million in Airport Revenue Bonds to finance a portion of the Near-Term Master Plan, and the delegation of authority to the Airport Director to implement the bond sale within certain parameters established by the Commission.

\* \* \*

G. ITEMS RELATING TO ADMINISTRATION, OPERATIONS & MAINTENANCE:

Item Nos. 3 and 4 were adopted unanimously.

3. Authorization to Conduct a Pre-Qualification Process for the Airport Employee Parking Operation Agreement

No. 99-0108

Resolution authorizing staff to conduct a pre-qualification process for the Airport Employee Parking Facilities Agreement, a Small Business Set-aside.

4. Award of Contract No. 3546R - Runway 28L - 10R Overlay and Reconstruction DeSilva Gates Construction, Inc. - \$11,205,840





No. 99-0109

Resolution awarding Contract 3546R, Runway 28L/10R Overlay and Reconstruction to the lowest responsive, responsible bidder, DeSilva Gates Construction, Inc. in the amount of \$11,205,840.

\* \* \*

#### H. CONSENT CALENDAR OF ROUTINE ADMINISTRATIVE MATTERS:

Item Nos. 5 through 19 were adopted unanimously.

5. Modification No. 1 to Professional Services Contract 5600.4 - Materials Testing & Special Inspection Services for South & North International Garages Kleinfelder - \$848,000

No. 99-0110

Resolution authorizing Modification No. 1 to Kleinfelder's Professional Services Agreement for Testing & Special Inspection Services for the South & North International Garages in the amount of \$848,000.

Funding for this Modification will be provided by \$650,685 previously budgeted for Materials Testing for the North International Parking Garage and an additional budget of \$197,315 will be transferred from Contract 5600, Administrative Budget and CIP funds with no impact to the Master Plan Baseline Budget.

6. Modification No. 3 of Professional Services Agreement with Transit Guideway Consultants for the Airport Rail Transit (ART) Guideway and Fixed Facilities Contract No. 5700 - Budget Transfers: \$670,000

No. 99-0111

Resolution approving Modification No. 3 of Professional Services Agreement for the Airport Rail Transit (ART) Guideway and Fixed Facilities, Contract No. 5700, with Transit Guideway Consultants, A Joint Venture of Parsons, Brinckerhoff, Quade and Douglas, Inc/Manna Consultants, Inc/MG Engineering, in the amount of \$670,000. These services are necessary to incorporate system vendor requirements into the construction documents, and to provide additional construction phase services.

Funding for this modification will come from budget transfers from existing budgets for related projects, and from the Airport's contribution to the



BART SFO Extension. This modification will not increase the funding requirements of the Master Plan.

7. Renew Contract with DuDell & Associates, Inc. to Provide a Media Campaign to Promote Shared Ride Options to SFO

No. 99-0112

Resolution exercising the first of four annual renewal options for the time and materials contract with DuDell & Associates, Inc., to provide a media campaign to promote shared ride options to SFO, for the period of June 28, 1999 through June 27, 2000, with a budget not to exceed \$450,000.

8. Acquisition of a Rare Book Collection for the San Francisco Airport Museums (SFO Museums) Aviation Library

No. 99-0113

Resolution approving the acquisition of a Rare Book Collection for the San Francisco Airport Aviation Library, Archive and Museum at an acquisition cost of \$200,000.

9. Award of Professional Legal Services Contract with Remy, Thomas & Moose, LP - \$50,000

No. 99-0114

10. Professional Service Contract with The California Academy of Sciences - \$150,000

No. 99-0115

Resolution approving a Professional Services Contract with the California Academy of Sciences to develop a comprehensive computerized database of species for San Francisco Bay fishes, invertebrates and shore plants that would be impacted by reconfigured runways. Not to exceed \$150,000.

11. Modification No. 3 to Smarte Carte's Lease No. 91-0021 for Provisioning of Luggage Carts at the Rental Car Facility until the AirTrain is Operational and Authorizing a Rental Credit - Not-to-Exceed \$12,000

No. 99-0116

Resolution approving Modification No. 3 to Smarte Carte's Lease No. 91-0021 for an interim Free Cart Program in the Rental Car Facility



("RAC") and a one-time rental credit of \$12,000 for Smarte Carte's providing free carts during the first week of the RAC operation.

12. Airport Shuttle Bus Service Agreement

No. 99-0117                      Resolution adjusting annual cost per hour rate to \$31.96 and incremental rate to \$26.99, authorizing management fee reflecting additional service in the amount of \$13,400, and reimbursing contractor for actual employee benefit costs paid in the amount of \$5,375.14.

13. Contract Modification for the Corporation of the Fine Arts Museums Conservation Laboratory Contract \$25,000

No. 99-0118                      Resolution approving a contract Modification with the Corporation of the Fine Arts Museums Conservation Laboratory Contract in the amount of \$25,000 for conservation services needed for the New International Terminal activation.

14. Consent to Assignment of AMR Combs, Inc. Fixed Base Operation Services Operating Agreement to Signature Flight Support Corporation

No. 99-0119

15. Revised Tenant Improvement Guide

No. 99-0120

16. Modification No. 1 to Contract No. 3606C - Abatement and Demolition of Various Facilities and Utility Construction Work - \$700,000

No. 99-0121

17. Bid Call - Contract 3851A - International Terminal Third Floor HVAC Renovation

No. 99-0122

18. Bid Call - Contract 4181 - Airport Facilities Mechanical Systems Improvement

No. 99-0123



19. Bid Call - Contract 4042 - North Terminal Mechanical Rooms - Modification of Pressurized Doors

No. 99-0124

\* \* \*

I. NEW BUSINESS:

This is the "Public Comment" section of the calendar. Individuals may address the Commission on any topic within the jurisdiction of the Airport Commission for a period of up to three (3) minutes. Please fill out a "Request to Speak" form located on the table inside the entrance to Room 428 and submit it to the Commission Secretary.

There were no requests from the public to speak.

\* \* \*

J. CORRESPONDENCE:

There was no discussion by the Commission.

\* \* \*

K. CLOSED SESSION:

Discussion and vote pursuant to Sunshine Ordinance Section 67.11 on whether to conduct a Closed Session.

The voted to go into closed session was 3 to 1, with Commissioner Crayton castint the dissenting vote. The public meeting was recessed at 9:34 AM and the closed session began.

The Airport Commission will go into closed session in accordance with Government Code Section 54956.9(a) to confer with legal counsel regarding pending litigation entitled the City and County of San Francisco vs ARCO; and Government Code Section 54956.9(b)(1) to confer with legal counsel regarding potential litigation. .

Discussion and vote pursuant to Brown Act Section 54957.1 and Sunshine Ordinance Section 67.14 on whether to disclose action taken or discussions held in Closed Session.

The public meeting was reconvened at 9:45 AM. The Commission determined that it was not in the public interest to disclose the nature of the closed session and voted unanimously not to disclose it.

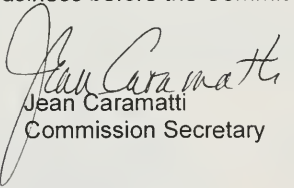
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L. ADJOURNMENT:





There being no further calendared business before the Commission the meeting adjourned at 9:46 AM.



Jean Caramatti  
Commission Secretary



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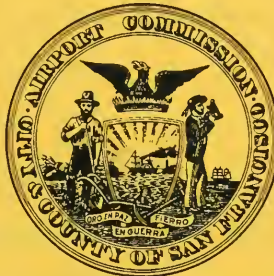
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## MINUTES

May 4, 1999

9:00 A.M.

✈ ROOM 400 - CITY HALL  
400 VAN NESS AVENUE  
CITY AND COUNTY OF SAN FRANCISCO

WILLIE L. BROWN, JR., MAYOR

## COMMISSIONERS

HENRY E. BERMAN  
President

LARRY MAZZOLA  
Vice President

MICHAEL S. STRUNSKY

LINDA S. CRAYTON

CARYL ITO

JOHN L. MARTIN  
Airport Director

SAN FRANCISCO INTERNATIONAL AIRPORT  
SAN FRANCISCO, CALIFORNIA 94128



Minutes of the Airport Commission Meeting of  
May 4, 1999

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F.		ITEMS RELATING TO MASTER PLAN PROJECTS:		
	2.	Modification No. 12 to Contract No. 5500E - International Terminal General Construction - Tutor-Saliba/Perini/Buckley & Company	99-0131	6-8
G.		ITEMS RELATING TO ADMINISTRATION, OPERATIONS & MAINTENANCE:		
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H.		CONSENT CALENDAR OF ROUTINE ADMINISTRATIVE MATTERS:		
	5.	Modification No. 5 of Professional Services Agreement, Contract No. 5520CM, Boarding Area G - Lehrer McGovern Bovis/FE Jordan/ Cabellon	99-0134	11
	6.	Modification No. 10 to State Legislative Advocacy Services Contract - Kenyon & Edelstein	99-0135	11
	7.	Modification No. 2 to Legislative Advocacy Services Contract - Smith, Dawson & Andrews	99-0136	11



8.	Modification No. 1 to Professional Services Contract for Thomas Parks	99-0137	11
9.	Authorization to Issue a Request for Proposals For a New Contract for Average Vehicle Rider- ship Surveys of Ground Transportation Operators	99-0138	11
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# AIRPORT COMMISSION MEETING MINUTES

May 4, 1999

## A. CALL TO ORDER:

The regular meeting of the Airport Commission was called to order at 9:00 AM in Room 400, City Hall, San Francisco, CA.

\* \* \*

## B. ROLL CALL:

Present: Hon. Henry E. Berman, President  
Hon. Larry Mazzola, Vice President  
Hon. Michael S. Strunsky  
Hon. Linda S. Crayton  
Hon. Caryl Ito

\* \* \*

## C. Adoption of Minutes:

The minutes of the regular meeting of April 6, 1999 were unanimously adopted .

No. 99-0130

\* \* \*

## D. DIRECTOR'S REPORTS:

### 1. Status Report on the Runway Reconfiguration Feasibility Study

Mr. John Martin, Airport Director explained that this is a status report on the Feasibility Study. The final report has been completed. Staff will return on June 1 for approval on the recommended preferred alternatives.

The Feasibility Study on Runway Reconfiguration was started in June 1998. We invited all of the Airport stakeholders to participate, including environmental organizations, environmental agencies, airlines, FAA, the business community and other regulatory agencies.

The goals established by the Commission were to reduce aircraft delays, handle the new generation of large aircraft, reduce noise, and to achieve net environmental gains in all areas.

URS Greiner was selected to conduct the Feasibility Study. As a result of a request made by a stakehold group, the Airport also undertook a regional air transportation study conducted by P & D Aviation was hired to perform that study.



Both studies are complete and have been transmitted to the Commission. We are also making the studies available to our stakeholder groups and are providing copies to libraries in San Francisco and San Mateo Counties.

In addition to the regular stakeholder meetings that were held over a seven month period, we have also briefed almost all of the City Councils in San Mateo County, held a number of press briefings and had extensive public outreach.

In general, the process used for the Feasibility Study is really a model for active public participation in a public agencies planning process. We have gone far beyond anything the Airport has done before in terms of reaching out for public input in a planning process.

The Runway Feasibility Study analyzed thirty different alternatives, that were then reduced to seven alternatives, which were analyzed at a much more detailed level. Those seven alternatives included a do nothing alternative.

Two of the alternatives meet the three initial goals, and appear to meet the goal of producing net environmental gains and produce a win, win, win for all of the stakeholder groups in all of the areas.

Recent studies we have undertaken have also shown that we can actually reduce noise over San Francisco with a runway reconfiguration. This is an improvement over what was earlier reported to the Commission where Airport staff and consultants felt that we could maintain current noise levels and not increase noise over San Francisco. We now believe that we can reduce noise over San Francisco.

The two alternatives that meet the initial goals set by the Commission are Alternatives BX and F2. They would both dramatically reduce delays by approximately 88%, producing about a 30% gain in Airport capacity as well. Both alternatives would allow the Airport to handle the new generation of large aircraft. Initially, when those aircraft begin service we expect only 6-8 daily flights, but they will have a severe impact on our airfield operations given their 49' wider wing spans.

Both alternatives would dramatically reduce noise impacts, producing a 95% reduction in the number of homes in the 65 cnel noise contour area. All of the communities in San Francisco, Northern San Mateo County, Central San Mateo County would see a reduction in noise from aircraft.

Both alternatives would also produce net environmental gains in terms of reducing air emissions and producing net improvements to the Bay itself. Environmental studies will continue to be performed in the next two years during the formal planning process that will be initiated in June.

The Regional Study showed that among the three Bay Area commercial airports, that in bad weather conditions we do not have enough capacity today to handle aircraft demands. The study projects that by 2010, even in good weather there will not be enough capacity among the three Bay Area airports.



The Airport has gone on record in support of High Speed Rail, and while certainly desirable, it will not significantly reduce the aircraft delays and reduce aircraft demand.

The study also found that in addition to San Francisco's needs for additional runway capacity and reconfigure the runways, that Oakland will need additional capacity somewhere between 2010 and 2015.

The Regional Airport Planning Commission recently approved a staff effort to update the Regional Airport System Plan, scheduled for completion in 12 months. This plan will address the needs of the three Bay Area commercial airports.

The Greiner study found that a reconfiguration is viable. More studies need to be conducted, but given existing fill techniques, we believe that the project is viable.

The Project cost estimate is \$2 billion. The financing study showed that the project is financially viable.

Extensive approvals will be required. We are working with several lead agencies now in finalizing MOUs as we move into the formal planning and environmental phase. Key agencies include the FAA, City Planning Commission, Bay Conservation District, Regional Water Quality Control Board, US Fish and Wildlife, State Fish and Game, and the list goes on.

The two alternatives that meet the goals of the Feasibility Study would require 1,000 to 1,100 acres of fill into Bay habitat areas. This would alter tidal circulation patterns and we acknowledge that extensive study needs to be done in order to minimize damage. We also recognize through this study the need to restore thousands of acres to the Bay itself through wetlands restoration.

Some of the mitigation sites that have been identified include a North Bay site with 11,000 acres and a South Bay site with 25,000. Fifty potential mitigation sites have been identified.

The Greiner study assumes that an additional 10% of the \$2 billion would be dedicated to environmental mitigation. This puts the price tag for mitigation at \$200 million.

On June 1st we will return to the Commission to request approvals of preferred alternatives and the selection of the lead planning firm as we move into the formal planning effort of the Airfield Development Program.

This is a win, win, win opportunity. It is important that Airport staff and the consultants continue to work toward achieving a regional consensus on this project. The need to serve the economy is one of the most important factors. Unless we reconfigure the runways we won't be able to provide additional capacity and reduce delays and we will fundamentally choke the economy of the San Francisco Bay Area. We will be proceeding on a very expedited basis.

Commissioner Strunsky asked if the Commission will have the opportunity to talk



with the Director about some of the issues before a vote is taken. One of the plans shows the full 4,000 feet between two of the runways, and one shows only about 3,000 feet. He asked what the impact of that would be and if we would be giving up anything?

Mr. Martin responded that he will be happy to provide more detailed briefings prior to the June 1st meeting.

\* \* \*

E. ITEMS INITIATED BY COMMISSIONERS:

There were no items initiated by Commissioners.

\* \* \*

F. ITEMS RELATING TO MASTER PLAN PROJECTS:

Item No. 2 was unanimously adopted.

2. Modification No. 12 to Contract No. 5500E - International Terminal General Construction - Tutor-Saliba Corporation, Perini Corporation and Buckley & Company, Inc. - \$28,000,000

No. 99-0131

Resolution approving Modification No. 12 to Contract 5500E, International Terminal General Construction, with Tutor-Saliba Corp, Perini Corp. and Buckley & Co., Inc. (TSPB), in the amount of \$28,000,000 for compensating contractors for impacts associated with airline initiated changes, concession expansion, design changes to facilitate construction and unanticipated site conditions. Funding source for this modification is the Master Plan Management Reserve.

Mr. Bruce Swanson, Bureau of Design and Construction, explained that this modification will be funded by Management Reserve and is within the overall Master Plan budget. It has been presented to the Airport Advisory Board and Legal staff, as well as the Airport's in-house auditor.

On August 20, 1999, the Commission awarded the Base General Building Contract for the new International Terminal to Tutor-Saliba/Perini Buckley (TSPB) in the amount of \$248,950,000. In February 1997, two additive alternates were selected in the amount of \$7.37 million. These alternates were for the fifth floor additions to the South and North Shoulder Building and the Special Terrazzo Artwork in the arrival's lobby that represents a world map. Also at this time, a change was initiated covering the BART Link Building that was later negotiated at \$14,250,000.

From April 1997 through August 1997, four other Contracts previously awarded





were novated and assigned to TSPB in the aggregate amount of \$38,170,000, along with various scope transfers from adjacent interfacing projects amounting to \$6,360,000.

The total contract value, including these additive alternates, novations and scope transfers (excluding the BART related changes) amounted to \$300,850,000. Since then, all negotiated changes, pending changes, and forecast contract growth as of December 31, 1998 have amounted to \$122,620,000 for a total forecast of \$423,470,000.

These changes represent approximately a 40% increase in manhours and for some of the major subcontracts the manhours actually more than doubled. Without an increase in time for contract performance, the work has required and still requires major acceleration, re-sequencing, added labor and supervision with the resultant potential for inefficiency and thus additional resources and supervision.

On December 31, 1998, TSPB submitted a price proposal for a Global Settlement of impacts associated with the changes summarized above. The settlement covers the inefficiencies associated with base contract and changes, the inefficiencies associated with acceleration and the premium costs of acceleration. The settlement covers TSPB and all its subcontractors except for four others (Harmon, Herrick, Harris, Miller-Thompson) where the work is basically complete and the inefficiencies/acceleration have been dealt with separately.

The Project Management Staff performed a thorough analysis of TSPB's proposal evaluating schedule, manpower, work progress, labor costs, inefficiencies and acceleration. The analysis concluded that the estimated cost should fall between \$16.8 million to \$28.6 million as compared to TSPB's proposal of \$38.3 million. Over the period of approximately 3 months, TSPB and Airport staff reached a negotiated agreement totaling \$28 million.

This agreement resolves TSPB's claim relating to the issues mentioned before and obligates TSPB to achieve substantial completion of the International Terminal by December 31, 1999 in accordance with the general terms and conditions of the base contract. In addition, it obligates TSPB to meet a number of interim milestone dates necessary for the succeeding and interfacing contracts to begin their work and also timely access for the tenant buildout that follows the completion of the base building and is necessary for the terminal opening next year as scheduled. The settlement also includes an allowance for future growth without entitlement to future additional claims for impact of this undefined work.

TSPB and its subcontractors will release the Airport of future costs and/or time impacts related to inefficiency or loss of productivity for all bulletins, changes and forecast growth covered by this agreement.

Without this settlement, a schedule extension of six to eight months is apparent. The resulting delay would impact the tenant improvements work and all interfacing related projects such as Security and Special Systems, Air Train Operating System, Baggage Handling, EMCS, PCAir/400 HZ.



The Project Management staff evaluated the delay and subsequent impacts to try and ascertain an order of magnitude assessment of potential costs that the Airport might be exposed to if we did not proceed with this change. The estimated exposure amounted to somewhere between \$22.7 million and \$32.7 million.

The Human Rights Commission MBE/WBE combined goal of 15% applies to this modification. The present status on the contract indicates TSPB has awarded 18.5% to MBE and 7.5% to WBE participation.

In summary, we believe it is in the best interest of the Airport and the Master Plan Program to enter into this proposed agreement and therefore we recommend your approval.

Commissioner Strunsky thought that Mr. Swanson understated the advantages of the settlement. He does not see any analysis of the legal costs and time to defend that would result if we did not accept this or something we close to it.

This is a necessary and advantageous settlement for this Airport.

Mr. Swanson said that usually in these instances it is better to agree with the right releases and commitments because it only gets worse.

Commissioner Strunsky added that we would also have the contractor on our side in these last down-to-the-wire finishing propositions. The inclusion of a 15% cost growth means that we are on the same side to get it done and at the right price.

Mr. Swanson said that we did not want to give the contractor an excuse to extend the schedule for each additional change.

Commissioner Crayton understood that there would be no additional change order costs.

Mr. Swanson responded that this addresses the inefficiencies associated with the changes. We have pending change orders and future anticipated contract growth where we will negotiate the direct cost. This deals with the inefficiencies of those changes to incorporate those changes without the schedule delay.

\* \* \*

#### G. ITEMS RELATING TO ADMINISTRATION, OPERATIONS & MAINTENANCE:

Commissioner Crayton was unanimously recused from voting on Item No. 3 due to a conflict of interest. Item Nos. 3 and 4 were unanimously adopted.

##### 3. Authorization to Lease Space at the Airport to Wireless Communications Service Providers According to the Approved Business Terms

No. 99-0132

Resolution approving the business terms for leasing wireless communications sites at the



Airport and authorizing staff to lease space at the Airport to wireless communications service providers at an annual cost of approximately \$60,000, based on .0015 cents per passenger.

Mr. Bob Rhoades, Deputy Director, Business and Finance explained that this item seeks approval to establish business terms for the leasing of wireless communications sites to wireless communications providers.

In 1994, the Airport issued its first space permits to wireless providers at the Airport. Over the past few years there has been an explosive growth in this business. In the last few years we have been approached by other wireless providers to also set up repeaters and other equipment on the Airport to service their customers.

Those proposals had a wide range of terms and conditions. Last year we sought to make uniform terms and conditions, particularly with respect to rent structure and where the equipment could be placed.

That spurred on a series of meetings and conversations with various wireless providers that culminated in a series of proposals being submitted. Those proposals were reviewed and a leasing policy was formed that we believe will return a fair economic value to the Airport and provide all of our customers with access to wireless services.

The item before the Commission proposed a rent structure of .0015 cents per passenger. Since the package was written, staff has had numerous conversations with the companies regarding the rent structure. We have come to an agreement that is before the Commission in the form of an amended resolution establishing a base rent of \$60,000 a year and includes appropriate escalation in each year of the contract to reflect the economic value of being on the Airport. More importantly, this will provide a much better product for our customers.

Commissioner Strunsky understood that we are going to a fixed fee rather than a per passenger fee.

Mr. Rhoades responded that we are.

Commissioner Strunsky asked what the term of the agreements would be.

Mr. Rhoades responded that this is a five year term with three-one year options vested solely in the Commission.

Commissioner Strunsky assumed that if the technology changes and there are no longer any land lines we could revisit this issue.

Mr. Rhoades responded that we could.

Mr. Robert McCarthy, McCarthy and Schwartz said that he has been asked by the four cellular carriers who have agreed to these terms to speak on their behalf.



Present is Louis Luvin and Mike Mangiantini from Cellular One, Chris Eldridge from Pacific Bell Wireless, Dave Cauchi from Nextel and Greg Sarab from Sprint PCS.

We have come to support and urge favorable consideration of the motion. He thanked Bob Rhoades and Patty Maitland for their patience in working with them. He thinks this is a fair resolution that creates a fair price for the services and facilities that the Airport will provide to them. It insures for the next five years, and possibly as long as eight years, a certain level of stability for the traveling public. It also reaches a fair resolution in terms of access to facilities and a fair price.

All four carriers have authorized him to make this representation and urge a favorable consideration.

He thanked the Airport staff for working with them, and Mr. Martin for helping to reach the final resolution.

4. Proposed Airport Concession Bond and Loan Assistance Program for Disadvantaged Business Enterprises (DBE)

No. 99-0133

Ms. Sandra Crumpler, Manager of the Airports Minority, Women, Disadvantaged Business Program, explained that the Airport's Surety Bond Program began in 1995 with the purpose of assisting small minority and women construction entrepreneurs to gain access to the surety bond market for Airport construction contracts.

The program is currently managed by J & H, Marge McClennan and the MBE joint venture parnter of Merriweather and Williams Insurance Services.

The program has successfully assisted over 40 small/minority/women contractors to obtain 61 surety bonds for contracts totalling \$45 million, and 12 working capital loans totaling \$4.2 million for Airport construction contracts. There have been no defaults of claims on these bonds or loans.

In September 1997 the Airport's program became a model for the City-wide Surety Bond Program.

The proposed Airport Concession Bond and Loan Assistance Program would broaden the level of participation for DBEs by assisting them and obtaining performance bonds and working capital loans for Airport retail and food and beverage concessions.

The program would be administered by Merriweather and Williams and offered to certified DBEs located in the nine Bay Area counties, with priority given to San Francisco-based DBEs.

The Airport would guarantee up to \$500,000 for working capital loans or 50% of





the loan amount, whichever is less. For performance bonds, credit enhancement would not exceed 40% of the bond value or \$500,000, whichever is less.

The total credit enhancement fund would be approximately \$2 million. Airport staff would monitor the program and report annually on the program's progress.

We will work with Wells Fargo Bank to increase the Airport's line of credit from \$4 million to \$6 million. We will seek approval from the Board of Supervisors to encumber the funds necessary to administer the program. We anticipate a program start date of July 1, 1999.

Commissioner Crayton said that she was very excited about this and asked what we were doing to further advertise the program and highlight this feature.

Ms. Crumpler responded that a press release will be issued as soon as approval is given. In addition, information will be provided to all contractors and concessionaires who will be bidding on the new International Terminal.

Commissioner Crayton hoped that we will provide this information to the minority newspapers, trade associations and minority Chambers.

Commissioner Ito commended the staff for presenting the proposal.

Commissioner Strunsky said that the figures are stunning. He wondered how many of these firms have used their ability to obtain bonds through the Airport to work in their favor for other contracts.

Commissioner Crayton asked if it was possible to highlight the 40 that have been approved. We need to be able to recognize that achievement in public forums.

\* \* \*

#### H. CONSENT CALENDAR OF ROUTINE ADMINISTRATIVE MATTERS:

Item Nos. 5 through 15 were unanimously adopted.

5. Modification No. 5 of Professional Services Agreement, Contract 5520CM - Boarding Area G - Lehrer McGovern Bovis, Inc./F.E. Jordan Associates, Inc./Cabellon Associates, Inc. \$497,000

No. 99-0134

Resolution approving Modification No. 5 of Professional Services Agreement, Contract 5520CM, Boarding Area G, Construction Management with Lehrer McGovern Bovis, Inc./F.E. Jordan Associates, Inc./Cabellon Associates, Inc. in the amount of \$497,000. This modification is extends construction management services for Boarding Area G. Funding source is Master Plan Management Reserve.



6. Modification No. 10 to State Legislative Advocacy Services Contract - Kenyon and Edelstein - \$72,000
- No. 99-0135                      Resolution approving Modification No. 10 of the Airport's Professional Services Contract with Kenyon and Edelstein for State Legislative Advocacy Services for FY 1999-2000, in the amount of \$72,000.
7. Modification No. 2 to Legislative Advocacy Services Contract - Smith, Dawson and Andrews - \$48,000
- No. 99-0136                      Resolution approving Modification No. 2 of the Airport's Professional Services Contract with Smith, Dawson and Andrews for Legislative Advocacy Services in Washington, DC for FY 1999-2000, in the amount of \$48,000.
8. Modification No. 1 to the Professional Services Contract for Thomas Parks - \$40,000
- No. 99-0137                      Resolution authorizing a Modification No. 1 to the Professional Services Contract for Thomas Parks to continue his services as an Airport liaison to the Peninsula cities and communities concerning aircraft noise issues - \$40,000.
9. Authorization to Issue a Request for Proposals for a New Contract for Average Vehicle Ridership Surveys of Ground Transportation Operators
- No. 99-0138                      Resolution authorizing staff to issue a Request for Proposals (RFP) for a new contract to conduct Average Vehicle Ridership Surveys of Ground Transportation Operators for a budget not to exceed \$50,000.
10. Bid Call - Contract 4184 - As-Needed Electrical Construction/Repairs 1999-2000
- No. 99-0139                      Resolution approving the scope, budget, and schedule for Contract 4184, As-Needed Electrical Construction/Repairs, 1999-2000 and authorizing the Director to call for bids when ready.



11. Bid Call - Contract 4185 - As-Needed Telecommunications Construction/Repairs 1999-2000

No. 99-0140 Resolution approving the scope, budget and schedule for Contract 4185, As-Needed Telecommunications Construction/Repairs 1999-2000 and authorizing the Director to call for bids when ready.

12. Bid Call - Contract No. 5606A - Permit Bureau Relocation

No. 99-0141 Resolution approving the scope, budget and schedule for Contract 5606A, Permit Bureau Relocation and authorizing the Director to call for bids when ready. The construction budget for this work is funded from the Airport's Capital Improvement Program funds with no impact on the Master Plan Baseline Budget.

13. Bid Call - Contract 4167 - Parking Garage Core "G" Ventilation Improvement

No. 99-0142 Resolution approving the scope, budget, and schedule for Contract No. 4167, Parking Garage Core G Ventilation Improvement.

\* \* \*

I. NEW BUSINESS:

This is the "Public Comment" section of the calendar. Individuals may address the Commission on any topic within the jurisdiction of the Airport Commission for a period of up to three (3) minutes. Please fill out a "Request to Speak" form located on the table inside the entrance to Room 428 and submit it to the Commission Secretary.

Mr. Robert Planthold said that the Director was at a recent political meeting and Mr. Planthold took the opportunity to send Mr. Martin a note indicating that he had not heard back from the Airport regarding the status of accessibility for all of the various modes of ground transportation to and within the Airport.

He had been at a paratransit conference the previous week. The conference was held at a hotel right outside of the Airport.

The Airport building is accessible, the hotel is accessible, but the hotel shuttle isn't.

After passing the note to the Director, he received a call from his staff within two days.

He paid special compliments to the Airport's ADA Coordinator Ron Fong, and to the Ground Transportation Manager Alice Sgourakis. Both of them were very helpful in



explaining what they had already done and in showing their level of knowledge.

This can be expected of the ADA Coordinator, but he was impressed with Alice's knowledge, insight, creativity and sensitivity.

The Airport often receives complaints about what it is doing wrong. The Airport needs to hear compliments about its staff and the process that they are going through.

Mr. Martin thanked Mr. Planthold for volunteering his time to come to the Airport and work with staff in making the Airport more accessible.

\* \* \*

J. CORRESPONDENCE:

There was no discussion by the Commission.

\* \* \*

K. CLOSED SESSION:

Discussion and vote pursuant to Sunshine Ordinance Section 67.11 on whether to conduct a Closed Session.

The Commission unanimously voted to go into closed session. The meeting recessed at 9:39 AM. The closed session was convened at that time.

The Airport Commission will go into closed session in accordance with Government Code Section 54956.9(b)(1) to confer with legal counsel regarding potential litigation. .

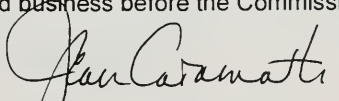
Discussion and vote pursuant to Brown Act Section 54957.1 and Sunshine Ordinance Section 67.14 on whether to disclose action taken or discussions held in Closed Session.

The public meeting was reconvened at 9:49 AM. The Commission determined that it was not in the public interest to disclose the nature of the closed session and voted unanimously not to disclose it.

\* \* \*

L. ADJOURNMENT:

There being no further calendared business before the Commission the meeting adjourned at 9:50 AM.

  
Jean Caramatti  
Commission Secretary





5  
3/99

# SAN FRANCISCO AIRPORT COMMISSION



## MINUTES

May 18, 1999  
9:00 A.M.

✈ ROOM 400 - CITY HALL  
400 VAN NESS AVENUE  
CITY AND COUNTY OF SAN FRANCISCO

WILLIE L. BROWN, JR., MAYOR

## COMMISSIONERS

HENRY E. BERMAN  
President

LARRY MAZZOLA  
Vice President

MICHAEL S. STRUNSKY

LINDA S. CRAYTON

CARYL ITO

JOHN L. MARTIN  
Airport Director

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Minutes of the Airport Commission Meeting of  
May 18, 1999

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	1.	Award Financial Advisory Services Contract in Connection with Airport's Capital Program - Siebert Brandford Shank & Co., and the J.V. of Public Financial Management and the Chapman Company	99-0144	3-4
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13.	Bid Call - Contract 4201 - West Field Road (R-6) Improvements	99-0155	9-10
14.	Authorization to Conduct Pre-bid Conference for New International Terminal Discretionary Store Lease	99-0156	10
15.	Authorization to Conduct Pre-Bid Conference for Two Automated Teller machine (ATM) Service Leases for the New International Terminal	99-0157	10
16.	Authorization to Conduct Pre-Request for Qualification/Proposals/Bid/ (RFQ/P/Bid) Conference for the North Terminal Hub Principal Retail Concession Lease	99-0158	10
17.	Approve Holdover of San Francisco Foreign Flag Carriers Right-of-Way Agreement	99-0159	10
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# AIRPORT COMMISSION MEETING MINUTES

May 18, 1999

## A. CALL TO ORDER:

The regular meeting of the Airport Commission was called to order at 9:00 AM in Room 400, City Hall, San Francisco, CA.

\* \* \*

## B. ROLL CALL:

Present: Hon. Larry Mazzola, Vice President  
Hon. Michael S. Strunsky  
Hon. Linda S. Crayton  
Hon. Caryl Ito

Absent: Hon. Henry E. Berman, President

\* \* \*

## C. ADOPTION OF MINUTES:

The minutes of the regular meetings of April 20, 1999 and May 4, 1999 were adopted unanimously.

No. 99-0143

\* \* \*

## D. ITEMS INITIATED BY COMMISSIONERS:

There were no items initiated by Commissioners.

\* \* \*

## E. ITEMS RELATING TO ADMINISTRATION, OPERATIONS & MAINTENANCE:

Item Nos. 1 through 6 were adopted unanimously.

1. Award of Financial Advisory Services Contract in Connection with the Airport's Capital Program - Siebert Brandford Shank & Co. and the Joint Venture of Public Financial Management and the Chapman Company - \$3,735,000

No. 99-0144

Resolution awarding maximum of \$3,735,000 for Financial Advisor Contracts to Siebert Brandford Shank & Co. and to the Joint Venture of Public Financial Management and the Chapman Co. in connection with the Airport's Capital Program.





Mr. Bob Rhoades, Deputy Director, Business and Finance explained that the Financial Advisor's primary role is to assist the Airport in developing and implementing cost effective financing plans. Some of the services they provide is assisting in the preparation of bond documents, including preliminary and official statements, evaluating underwriting bids submitted for Airport bonds, and evaluating the Airport's financial needs and plans.

On September 17, 1998, the Airport received five proposals for the financial advisor services. Bids were submitted by First Albany and Unison Consulting Group, Fullerton and Friar Public Financial Management and the Chapman Group, Public Resources Advisory Group and Seibert Brandford.

Staff is recommending award of co-financial advisor contracts to Seibert Brandford Shank and Company and the joint venture of Public Financial Management and the Chapman Company.

Seibert Brandford has been the Airport's financial advisor since 1988 and has assisted in the development and implementation of the financing for the Near Term Master Plan Construction Program. Seibert is an M/WBE firm based in San Francisco, however, it has not been certified by the HRC because of its revenue size.

Public Financial Management and the Chapman Company have expertise in PFC financing and staff recommends that we select them as well because of our impending move toward the PFC environment.

Commissioner Strunsky said that he was not a great fan of PFCs and he hoped that we are very careful in evaluating them. They are a tax on the people of San Francisco and should be approached cautiously.

Commissioner Ito noted that this is under a two year Capital Program and asked if the \$3.735 million is a per year cost or for the two year period?

Mr. Rhoades responded that it is for the two year period.

2. Award Contract 3606K - On-Call Environmental Remediation Phase III - Removal and Disposal of Contaminated Soil, Sludge, and Other Related Environmental Work - Ogiso Environmental - \$1,942,585

No. 99-0145

Resolution awarding Contract 3606K, On-Call Environmental Remediation Phase III, Removal and Disposal of Contaminated Soil, Sludge, and Other Related Environmental Work in the amount of \$1,942,585.

Mr. Ernie Eavis, Deputy Director, Facilities Operations and Maintenance said that the purpose of this contract is to provide environmental remediation services for Master Plan and other Capital Improvement Projects when a construction contractor encounters unknown contamination not included in the original scope of



their work. In order to minimize delays, the Airport retains a contractor to provide hazmat clean-up on short notice and to avoid hasty negotiations.

The contractor has met the MBE/WBE subcontracting requirements and is eligible for award of this contract.

Commissioner Strunsky asked if the contractor comes with permitted dumpsites.

Mr. Eavis responded that they take the material to a certified dumpsite. It is costed out and the contractor has the necessary paperwork to take the hazardous material to the dumpsite where they retain possession of it forever.

Commissioner Strunsky assumed that that is included in the price.

Mr. Eavis responded that it is.

3. Modification No. 7 to Airline Liaison Office Agreement - \$1.6 million

No. 99-0146

Resolution approving Modification No. 7 to the Airline Liaison Office agreement to extend the agreement to June 30, 2000, with additional compensation of \$1.6 million.

Mr. Rhoades said that since 1994 the Airline Liaison Office (ALO) has been working with Airport staff on the Near Term Master Plan. The ALO was formed because the airlines no longer possess the facilities people and planners that can be made available as we move forward on both the design and construction of the new International Terminal and related projects.

The ALO also assists us with the re-development of the our domestic terminal program that will include a number of airline relocations into the new International Terminal.

As an adjunct to this, the ALO will also provide their expertise as we move forward on the Airfield Development Program, which is part of the 1999/00 budget.

The Near Term Master Plan portion of their work is being reduced this year in recognition that we are coming to a close on the Near Term Master Plan Program. Also included in the budget are certain consulting services on an as-needed basis. The company that formed the ALO has expanded into other services that includes concession development. We use those services on an as-needed basis.

4. Bid Call - Contract No. 5500S - Aviation Library, Archive and Museum

No. 99-0147

Resolution approving the Scope, Budget and Schedule for Contract 5500S, Aviation Library, Archive and Museum, and authorizing the Airport Director to call for bids when ready.



Mr. Costas, Acting Director, explained that the Commission adopted a resolution in 1991 establishing an Aviation Library, Archive and Museum in the new International Terminal. This item authorizes a bid call for that facility.

This will be an 8,500 sq. ft. facility budgeted at \$3.5 million.

5. Use of the Design/Build Ordinance for the Airport Hotel Project

No. 99-0148

Resolution that 1) determines that use of the Design/Build Ordinance (Section 6.09 of the Administrative Code) for the Airport hotel project is necessary, appropriate, and in the public's best interest; and 2) authorizes the Director to notify the Board of Supervisors of the Airport's intention to seek design, build, and operate proposals.

Mr. Rhoades said that the proposed location for the new Airport hotel will consist of approximately 7 acres in the vicinity of what was the Hilton site. We are now moving forward towards the development of this property. We believe that a design/build approach is the most prudent for achieving three things ... the Airport desires to own the facility, we prefer to have a lease term in the 15 to 20 year range, rather than the typical 40 to 50 year range so that we can maintain flexibility. We believe that by using a design/build team that we can optimize revenues and expedite construction of the project.

The Board of Supervisors recently passed legislation that permits departments to award design/build projects to a private entity where necessary or appropriate to achieve cost savings and/or time efficiencies.

We are seeking the Commission's approval to notify the Board of Supervisors of our intent to move forward with a design/build project.

The AirTrain Operating System is also a version of the design/build approach.

Commissioner Crayton asked if we have a history in ownership of the facility.

Mr. Rhoades responded that we have philosophically taken the approach that by owning and controlling our facilities we maintain flexibility. We have seen in the past, with leases that ran for 40-50 years, the problems that arise when space is needed and adjustments to leases must be made.

We have already done this with the Fixed Base Operation (FBO). We built the building and we have a 10 year operating agreement for the facility. It is producing a positive revenue flow.

We have a limited supply of land and facilities so it is important to maintain this flexibility.

A first class hotel operator will be engaged to manage the property.



Commissioner Crayton asked that there be opportunities for M/WBEs to participate in the process.

Mr. Rhoades responded that under the design/build ordinance, the City's procedures with respect to M/WBE participation must be followed. We will have a keen interest in the concession program within the hotel and we will want to have an M/WBE program for the hotel concessions.

Commissioner Crayton said that she was interested in M/WBE participation in the larger piece of it.

6. Approval of Business Terms and Qualifications Requirements - New International Terminal Fine Dining Restaurant

No. 99-0149

Mr. Rhoades explained that this is the final piece in our proposed food and beverage program for the new International Terminal. We have already proceeded with Phase 1 for the food courts, the casual dining facilities and cocktail lounges. We are about to enter into Phase 2 of that part of the program. Phase 2 proposals will be due at the end of June of this year.

The fine dining facility will be the showpiece. It will be located on the east wall and will consist of about 7,000 sq. ft. We are requiring that proposers must have three years of experience in the last five years in the ownership or management of a full service sit down restaurant, with a minimum of \$500,000 in revenue in each of the qualifying years. The agreement will be for 10 years and it will be based on a percentage rent.

\* \* \*

F. **CONSENT CALENDAR OF ROUTINE ADMINISTRATIVE MATTERS:**

Item Nos. 7 through 11 and 13 through 18 were adopted unanimously. Item No. 12 was put over.

7. Retirement Resolution for Mr. Steve Pristavok

No. 99-0150

8. Award Contract 4000 - Roofing and Waterproofing Specialist for Building Envelope Remediation - Professional Services - Allana-Lippert, Inc. - \$529,200

No. 99-0151

Resolution awarding Contract 4000, Roofing and Waterproofing Specialist Services for Building Envelope Remediation - Professional Services to Allana-Lippert, Inc., in the amount of \$529,200.





9. Award Contract 4021 - Terminal Upper Level Viaduct - Concrete Repair - M.H. Construction Management Co. - \$374,840

No. 99-0152                      Resolution awarding Contract 4021, Terminal Upper Level Viaduct, Concrete Repair, to the lowest responsive, responsible bidder, M.H. Construction Management Co., in the amount of \$374,840.

10. Award Contract 3935 - Emergency Carpet Repair - Resource and Design, Inc. - \$137,900

No. 99-0153                      Resolution awarding Contract 3935, Emergency Carpet Repair to Resource and Design, Inc., in the amount of \$137,900.

11. Modification No. 1 to the Maintenance Agreement with Marconi Aerospace Defense System Inc - \$321,498

No. 99-0154                      Resolution authorizing Modification No. 1 to the Maintenance Agreement with Marconi Aerospace Defense System Inc. to expand the scope of maintenance work to be performed and increase the dollar amount by \$321,498 for a total Maintenance Agreement not to exceed \$613,132.

Item No. 12 was put over.

12. Award Shoeshine Service Lease - North Terminal Shines - Minimum Annual Guarantee: \$5,000

Resolution awarding the Shoeshine Service Lease to North Terminal Shines, a Small Business Enterprise Set-Aside.

Charles Tillage, representing Shine 'Em Up Enterprises and Tom Appleton, submitted a letter this morning voicing their objections to the award being made to North Terminal Shines.

His objection is based on Administrative Code, Section 6.65 which prohibits collusion and preferential treatment in the awarding of City contracts and the bidding of City services.

He believes that there has been either collusion, but most likely preferential treatment provided to North Terminal Shines in the awarding of this contract. They base their allegation on the fact that the Airport changed the qualifications after the initial proposals were submitted and North Terminal Shines failed to qualify. Once



the qualifications were changed, North Terminal Shines qualified.

This raises a presumption of preferential treatment. It also raises the question of impropriety on the part of the Airport in awarding contracts and violates the Section of the Administrative Code prohibiting preferential treatment.

He called for the Commission to conduct an investigation to determine if collusion or preferential treatment occurred in the decision to award the contract to North Terminal Shines.

The Commission was asked to change the qualifications in March. The grounds for that request was to broaden participation. If staff had asked the Commission to expand the scope so that North Terminal Shines could qualify and be awarded the contract, the Commission would not have stood for that.

This is a question of fairness to the other proposers. Shine 'Em Up contends that because the qualifications were changed in order for North Terminal Shines to qualify, it excluded them unfairly.

Mr. Costas asked Mr. Tillage if he has discussed this with staff prior to this meeting.

Mr. Tillage responded that Shine 'Em Up received notice regarding this award on Friday. His client contacted him on Monday and he is before the Commission today.

Mr. Rhoades said that he explained to the Commission in March that his objective was to expand the opportunity. Previous shoeshine operators were intended to be included in this opportunity. Of the two previous operators, one submitted a proposal. We are also looking for other operators, particularly in San Francisco.

The selection process included a panel of three staff members, including our Outreach Officer. The four proposals were evaluated based on airport experience, management operation experience, financial performance, and local preference. North Terminal Shines scored the highest, followed by Leather Care, Shine 'Em Up, and Evelyn Bird.

Mr. Costas asked if Shine 'Em Up participated fully in the proposal process.

Mr. Rhoades responded that he would have to ask staff how that transpired.

Commissioner Mazzola suggested removing the item from the calendar in order to look into the matter.

Mr. Costas agreed.

### 13. Bid Call - Contract No. 4201 - West Field Road (Road 6) Improvements

No. 99-0155

Resolution to approve the scope, budget, and schedule for Contract 4201, West Field Road



(Road 6) Improvements, and to authorize the Director to call for bids when ready.

14. Authorization to Conduct Pre-bid Conference for New International Terminal Discretionary Store Lease

No. 99-0156

15. Authorization to Conduct Pre-Bid Conference for Two Automated Teller Machine (ATM) Service Leases for the New International Terminal

No. 99-0157

Resolution authorizing staff to conduct a Bid Conference for two ATM Service Leases and approving the proposed minimum qualifications and lease specifications.

Commissioner Strunsky said that he has seen currency exchange machines like ATMs in other airports.

Mr. Rhoades said that he will be before the Commission on June 1 for the pre-bid for the foreign exchange lease and will make sure that this item is included for discussion with the prospective proposers.

16. Authorization to Conduct Pre-Request for Qualification/Proposal/Bid (RFQ/P/Bid) Conference for the North Terminal Hub Principal Retail Concession Lease

No. 99-0158

Resolution authorizing staff to conduct a Pre-RFQ/P/Bid Conference for the North Terminal Hub Principal Retail Concession Lease and approving the proposed minimum qualifications and lease specifications.

17. Approve Holdover of San Francisco Foreign Flag Carriers Right-Of-Way Agreement

No. 99-0159

Resolution authorizing month-to-month holdover of the San Francisco Foreign Flag Carriers Right of Way Agreement.

18. Modification No. 8 of American Airlines, Inc.'s Lease and Use Agreement

No. 99-0160

Resolution modifying American Airlines, Inc.'s Lease and Use Agreement No. 82-0111 to modify the premises description in the North Terminal.

\* \* \*



G. NEW BUSINESS:

This is the "Public Comment" section of the calendar. Individuals may address the Commission on any topic within the jurisdiction of the Airport Commission for a period of up to three (3) minutes. Please fill out a "Request to Speak" form located on the table inside the entrance to Room 428 and submit it to the Commission Secretary.

Mr. Dave Barlow, United Taxicab Workers, said that the Commission has received bids for the Curbside Management Program. He works with cab drivers in San Francisco and at the Airport and there are four areas that they believe need attention.

They would like management to respond to their concerns regarding corrupt transactions among the dispatchers, starters and cab drivers.

They would like to see a night manager on duty. He explained that when they are sent to the islands from the holding lots, they follow the direction of the starter and some of the drivers end up at the United stand. There are periods later at night when the United stand doesn't move. Meanwhile, other cabs are called up from the holding lot after a short wait and are sent to the busy stands. These drivers end up leaving the Airport before those who have been sent to the United stand.

The dispatchers and starters are not always clear on policy and use inappropriate language or actions towards drivers and passengers.

Commissioner Mazzola asked Mr. Barlow to put his comments in writing.

\* \* \*

H. CORRESPONDENCE:

There was no discussion by the Commission.

\* \* \*

I. CLOSED SESSION:

Discussion and vote pursuant to Sunshine Ordinance Section 67.11 on whether to conduct a Closed Session.

The Airport Commission voted unanimously to go into closed session. The Commission recessed its public meeting at 9:30 AM and began the closed session.

The Airport Commission will go into closed session in accordance with Government Code Section 54956.9(b)(1) to confer with legal counsel regarding potential litigation. .

Discussion and vote pursuant to Brown Act Section 54957.1 and Sunshine Ordinance Section 67.14 on whether to disclose action taken or discussions held in Closed Session.



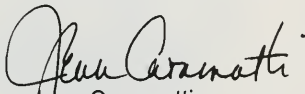


The Commission reconvened its public session at 9:46 AM. The Commission determined that it was not in the public interest to disclose the nature of the closed session and voted unanimously not to disclose it.

\* \* \*

J. ADJOURNMENT:

There being no further calendared business before the Commission the meeting adjourned at 9:47 AM.

  
Jean Caramatti  
Commission Secretary



99

# SAN FRANCISCO AIRPORT COMMISSION



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## MINUTES

June 1, 1999  
9:00 A.M.

✈ ROOM 400 - CITY HALL  
400 VAN NESS AVENUE  
CITY AND COUNTY OF SAN FRANCISCO

WILLIE L. BROWN, JR., MAYOR

## COMMISSIONERS

HENRY E. BERMAN  
President

LARRY MAZZOLA  
Vice President

MICHAEL S. STRUNSKY

LINDA S. CRAYTON

CARYL ITO

JOHN L. MARTIN  
Airport Director

SAN FRANCISCO INTERNATIONAL AIRPORT  
SAN FRANCISCO, CALIFORNIA 94128



Minutes of the Airport Commission Meeting of  
June 1, 1999

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# AIRPORT COMMISSION MEETING MINUTES

June 1, 1999

## A. CALL TO ORDER:

The regular meeting of the Airport Commission was called to order at 9:00 AM in Room 400, City Hall, San Francisco, CA.

\* \* \*

## B. ROLL CALL:

Present: Hon. Henry E. Berman, President  
Hon. Larry Mazzola, Vice President  
Hon. Linda S. Crayton  
Hon. Caryl Ito

Absent: Hon. Michael S. Strunsky

\* \* \*

## C. ADOPTION OF MINUTES:

The minutes of the regular meeting of May 18, 1999 were adopted unanimously.

No. 99-0161

\* \* \*

## D. DIRECTOR'S REPORTS:

### 1. Airfield Development Program - Public Involvement and Project Scoping

Ms. Peg Divine, Deputy Director, Airfield Development explained that the Airfield Development Project, the runway configuration, has completed the feasibility phase. The Commission has received copies of the feasibility report and the regional report.

We are beginning to meet with the environmental community, and we will meet with the communities in five counties ... San Francisco, San Mateo, Marin, Alameda and Santa Clara Counties. Those meetings are scheduled for mid to late June, and possibly one in July. At those meetings we will receive public input on the project purpose, the need, project definition, the needed studies and the alternatives.

Once scoping sessions have been completed with the FAA and the Office of Environmental Review, and when we feel that there is sufficient information available to answer questions on air space, sedimentation, circulation, etc. we will return to the Commission with a recommendation on a locally preferred alternative.



In addition to studying the locally preferred alternative, including the EIR and the EIS, we will include the do-nothing alternative, the no-build with operational enhancement and systems management alternative, and a minimum fill alternative.

Commissioner Ito asked if the community meetings would include language assistance participants.

Ms. Divine responded that she would see that we do.

\* \* \*

#### E. ITEMS INITIATED BY COMMISSIONERS:

Commissioner Crayton suggested that we promote our hiring process in the minority newspapers, including the number of employees we need, how successful we have been, and those areas where we need help. We should also highlight those agencies that we are working with to make that happen.

There is a great deal of misconception on what is happening and what we are doing. There should not be any questions about our employment practices, our hiring status and what we are doing.

Mr. Martin said that we are planning a supplement for inclusion in San Francisco minority-based newspapers, highlighting our construction program, our performance in achieving high levels of diversity in contracting and employment, and future employment opportunities.

Mr. Peter Nardoza, Deputy Director, Public Affairs responded that the Commission will award a public relations contract at the next meeting for the opening of the new International Terminal next year. The first assignment for that team will be to construct these supplements for placement in all neighborhood and minority newspapers throughout the City. This supplement will provide the history and success of the project and the involvement of the various minority groups.

\* \* \*

#### F. ITEMS RELATING TO MASTER PLAN PROJECTS:

Item Nos. 2 and 3 were adopted unanimously.

2. Modification No. 2 to Contract No. 5905A - Inbound and Outbound Ramps and Structures - Myers/Kulchin-Condon, A Joint Venture - \$3,650,000

No. 99-0162

Resolution approving Modification No. 2 to Contract 5905A, Inbound and Outbound Ramps and Structures, with Myers/Kulchin-Condon, A Joint Venture, to incorporate the Realignment of South McDonnell Road.

Modification in the amount of \$3,650,000 funded



from Contract 5903C, R-2 final Widening South, and Contract No. 5601H, Utility Relocations Phase 6, with no impact on the Master Plan Baseline Budget or Baseline Schedule.

Mr. Tom Kardos, Deputy Director, Bureau of Design and Construction explained that this modification incorporates the realignment of South McDonnell Road into Contract No. 5905A, the Inbound/Outbound Ramps Project. The realignment work has a direct impact on the construction of the Highway 101 North-bound off-ramp to the Airport and the North-bound on-ramp to Highway 101 from the Millbrae intersection.

To maintain the Master Plan completion schedule, the realignment work needs to begin in June 1999, leading staff to propose this contract modification as the only practical solution.

In order to insure fair and reasonable pricing, the contractor was directed to obtain competitive bids from subcontractors and use the base contract's competitively bid unit prices. Approximately 70% of the quoted price of \$3.65 million is based on competitive bids.

This modification will be funded by budget transfers from other Master Plan contracts with no impact on the baseline budget or schedule.

The base contracts 14% MBE / 3% WBE participation will apply to this modification.

The Master Plan Technical Advisory Board reviewed and approved this change order.

3. Modification No. 2 to Contract No. 5500J - SFIA North Connector Package General Construction - Dillingham Construction - \$1,875,733.53

No. 99-0163

Resolution approving Modification No. 2 to Contract 5500J, SFIA North Connector Package General Construction with Dillingham Construction, in the amount of \$1,875,733.53, for work related to design changes to facilitate construction and unforeseen obstruction.

Funding sources are Construction Contingency and Management Reserve.

Mr. Kardos explained that the general construction contract for the International Terminal North Connector package was awarded to Dillingham Construction in May 1997. The facility is the structure connecting the new International Terminal to the existing North Terminal.

This modification is a compilation of changes reviewed and approved by the Master Plan Technical Advisory Board and includes design changes to accommodate





construction, unanticipated site conditions and unforeseen utility conflicts.

The total amount of the change is \$1,875,529 funded by the contract's contingency budget and management reserve. The costs have been included in our forecast presented to the Commission in our most recent quarterly report.

The MBE/WBE participation established for the base contract (17%MBE / 8% WBE) applies to the change as well.

\* \* \*

G. ITEMS RELATING TO ADMINISTRATION, OPERATIONS & MAINTENANCE:

Item No. 4 was put over. Item Nos. 5 through 7 were adopted unanimously.

4. Award of Professional Services Contract for Public Relations Services for the Runway Reconfiguration Program - Solem & Associates - \$500,000

Resolution awarding a Professional Services Contract for Public Relations Services for the Runway Reconfiguration Program to Solem and Associates, for an amount not to exceed \$500,000.

Mr. Martin asked that this item be removed from the calendar.

5. Award of Shoeshine Service Lease - North Terminal Shines - Minimum Annual Guarantee: \$5,000

No. 99-0164

Resolution awarding the Shoeshine Service Lease to North Terminal Shines, a Small Business Enterprise Set-Aside, with a minimum annual guarantee of \$5,000.

Mr. Bob Rhoades, Deputy Director, Business and Finance explained that on April 14, 1999 staff received four proposals for this lease. A panel of Airport staff rated the proposals. North Terminal Shines received the highest score.

North Terminal Shines is a partnership between Mr. Welton Flynn and Mr. Reuben Nash. It is a certified African American minority-owned business enterprise based in San Francisco.

6. Certification of Eligible Bidder and Authorization to Negotiate Management Fee for the Airport Employee Parking Facilities Operating Agreement

No. 99-0165

Mr. Rhoades explained that staff received two proposals ... one from ABC Parking



Inc/Thor, and the other from ACE Parking Management. ACE Parking was deemed to be non-responsive because their revenue base exceeded the allowable maximum.

Staff recommends ABC Parking Inc/Thor, a Joint Venture between an Asian American and an African American business. They currently manage the Bush/Polk parking garage.

Staff will proceed with negotiations on the management fee.

Mr. Martin said that this is an Airport-unique program where we have carved out this part of the Airport's parking operation for small businesses. San Francisco minority-based small businesses were targeted for this opportunity.

This is the first Airport parking contract that is not under a large parking operator.

Commissioner Crayton said that she was pleased that Airport staff considered comments made by respondents vying for this contract to try to devise a policy that would be fair to everyone.

7. Modification No. 7 - Airport Feasibility Consultant Services - John F. Brown Company - \$985,000

No. 99-0166

Resolution approving Modification No. 7 to the Airport Feasibility Consultant Services Contract with the John F. Brown Company, in the amount of \$985,000 and extending the contract term to June 30, 2005.

Mr. Marcus Perro, Financial Planning, said that the John F. Brown Company has served the Airport well over the last 15 years. They have endeavored to meet 20% of their subcontracting to minority and small business companies. With this new modification they are endeavoring to meet 5% of the subcontracting goals. They are in compliance with the Domestic Partners Ordinance.

John F. Brown has provided feasibility studies for bond reports. They have advised on the Master Plan, provided traffic forecasts, and assisted on financial budgetary and rate-making analyses.

This modification will allow the John F. Brown Company to provide services in connection with the Airfield Congestion Delay Study. The \$985,000 should be sufficient for those services. We are also requesting extension of their term.

\* \* \*

H. **CONSENT CALENDAR OF ROUTINE ADMINISTRATIVE MATTERS:**

Item Nos. 8 through 23 were adopted unanimously.



8. Modification No. 5 to Professional Services Agreement Contract No. 5520 for Boarding Area G - Hellmuth, Obata & Kassabaum - \$658,499

No. 99-0167

Resolution approving Modification No. 5 of Professional Services Agreement, Contract 5520, Boarding Area G with Hellmuth, Obata & Kassabaum in the amount \$658,499. This modification extends construction administration services, preconditioned air/400 Hertz changes, security & special system changes, and artwork changes for Boarding Area G.

Funding sources are Master Plan Management Reserve, Security and Special systems, and Art Enrichment budgets.

9. Award of Contract No. 4126 - Utility Service Repairs and Miscellaneous Work, FY 1999/00 - JMB Construction, Inc. - \$449,450

No. 99-0168

Resolution awarding Contract 4126, Utility Service Repairs and Miscellaneous Work, FY 1999/00 to JMB Construction, Inc., in the amount of \$449,450.

10. Award of Contract No. 5500.2 - Architectural/Engineering Professional Services for the New Airport Senior Administrative Offices in the New International Terminal TGA Architects, Inc. - \$308,000

No. 99-0169

Resolution awarding Contract 5500.2, Architectural/Engineering Professional Services for the New Airport Senior Administrative Offices in the New International Terminal to TGA Architects, Inc. in the amount of \$280,000, plus an allowance of \$28,000 for additional services, for a total amount of \$308,000 to be funded from Capital Improvement Project (CIP) funds with no impact on the Master Plan Baseline Budget.

11. Award of Contract No. 4076 - International Terminal F.I.S. Re-carpet - Resource and Design, Inc. - \$316,815

No. 99-0170

Resolution awarding Contract 4076, International Terminal F.I.S. Re-carpet to Resource and Design, Inc., in the amount of \$316,815.

12. Award of Contract No. 4117 - Airport Facilities HVAC Improvement - Newcomb



Mechanical - \$288,559

No. 99-0171

Resolution awarding Contract 4117, Airport Facilities HVAC Improvement, to Newcomb Mechanical in the amount of \$288,559.

13. Award of Professional Services Contract for the Planning and Execution of Special Events for the Opening of the New International Terminal - \$150,000

No. 99-0172

Resolution awarding a Professional Services Contract for the planning and execution of special events for the opening of the New International Terminal to Rita Barela Productions, a certified M/WBE in the amount of \$150,000.

Commissioner Ito asked if there is a consequence to the contract if they fail to raise the \$1 million.

Mr. Nardoza responded that the contract will be on a not-to-exceed sum so the amount of money spent will be closely related to the amount of money raised.

14. Award of Professional Legal Services Contract - Hopkins & Sutter / Sheppard, Mullin, Richter & Hampton / Berliner\*Cohen / Erickson, Beasley, Hewitt & Wilson \$100,000

No. 99-0173

Resolution awarding Professional Legal Services Sgreements to the law firms of Hopkins & Sutter / Sheppard, Mullin, Richter & Hampton to serve as outside counsel for land use/environmental issues, and Berliner\*Cohen and Erickson, Beasley, Hewitt & Wilson to serve as outside counsel for eminent domain matters, at an initial cost of \$100,000 each.

15. Modification No. 21 to Professional Legal Services Agreement - Morrison & Foerster, LLP - \$500,000

No. 99-0174

Resolution approving Modification No. 21 to Professional Legal Services Agreement (Noise/Environmental Contract) with Morrison & Foerster to increase compensation by the amount of \$500,000; all other terms and conditions of the contract to remain in full force and effect.

16. Modification No. 12 to Legal Services Contract - Howard, Rice, Nemerovski, Canady, Falk & Rabkin - \$100,000





No. 99-0175

Resolution approving Modification No. 12 to Legal Service Contract with Howard, Rice, Nemerovski, Canady, Falk & Rabkin to broaden scope of services to include land use/environmental law matters and increase compensation by \$100,000; all other terms and conditions of contract to remain in full force and effect.

17. Modification No. 1 to Professional Services Contract for the Development and Implementation of an Airline Expansion/Business Growth Coalition - MacKenzie Communications - \$100,000

No. 99-0176

Resolution authorizing Modification No. 1 to Professional Services Contract with MacKenzie Communications for the Development and Implementation of an Airline Expansion/Business Growth Coalition to increase the amount by \$100,000 and to extend the term from July 1, 1999 through June 30, 2000.

18. Modification No. 4 to Professional Services Agreement to Provide Consultant Services in Connection with the Airport Medical Clinic Program - Dr. Lawrence A. Smookler - \$130,000

No. 99-0177

Resolution approving Modification No. 4 to the Professional Services Agreement with Dr. Lawrence A. Smookler to provide consultant services in connection with the Airport Medical Clinic Program in the amount not-to-exceed \$130,000 for FY 1999/00.

19. Authorization to Accept Qualifications/Proposals and Bids for the New International Terminal Bookstore/Cafe Lease

No. 99-0178

Resolution approving the Lease specifications and authorizes staff to accept Qualifications / Proposal and Bids for the New International Terminal Bookstore/Cafe Lease.

20. Authorization to Accept Proposals for the Turn-Key Public Communications Service Lease

No. 99-0179

Resolution approving the lease specifications and authorizing staff to accept proposals for the Turn-Key Public Communications Services Lease.



21. Lease of Off-Airport Office Space

No. 99-0180

Resolution approving the City's Lease of off-Airport office space at 1828 El Camino Real, Burlingame, CA, between Independent Holding, LLC, as Landlord and CCSF, acting by and through its Airport Commission, as Lessee for an annual rent of \$208,639.80.

Commissioner Ito noted that at a previous meeting the Commission approved an off-site lease for Airport staff.

Mr. Martin responded that that space accommodates these needs, however, space is required for the Roundtable staff. We have found over the years that it is important to keep the Roundtable staff separate from the Airport staff. Although funded by the Airport, the Roundtable works for San Mateo County. We don't want San Mateo County to view the Roundtable as having been coopted by the Airport.

The Roundtable staff is currently in a warehouse in So. San Francisco. Since we have leased larger warehouse space, we are giving up that location for this one. Another location is needed for the Roundtable staff. The EEO Unit will also be house in that space.

22. Garage Taxi Staging Area Mobile Catering Truck Leases "A" and "B" - Exercise First One-Year Option - Fresh and Natural

No. 99-0181

Resolution exercising first option of Garage Taxi Staging Area Mobile Catering Truck Leases "A" and "B" with Fresh and Natural.

23. Acceptance and Expenditure of Recurring FAA Funding for K-9 Explosives Detection Team Program

No. 99-0182

Resolution authorizing the acceptance and expenditure of recurring FAA funding of \$312,500 and additional funds received thereafter for the K-9 explosives detection team program.

\* \* \*

I. NEW BUSINESS:

This is the "Public Comment" section of the calendar. Individuals may address the Commission on any topic within the jurisdiction of the Airport Commission for a period of up to three (3) minutes. Please fill out a "Request to Speak" form located on the table inside the entrance to Room 428 and submit it to the Commission Secretary.

Ms. Amy Quirk, with the Alliance for a Clean Waterfront (an umbrella organization with



affiliates such as Bay Keeper, Golden Gate Autoban, the Southeast Alliance for Environmental Justice, the Sunset Community Democratic Club and a number of other environmental and community organizations) said that about two weeks ago the Airport met with representatives of the environmental community, including a representative from the Alliance for a Clean Waterfront. At that meeting a request was made by Michael Lozzo, a representative for the Alliance and Bay Keeper, that independent experts evaluate water quality issues regarding the Runway Reconfiguration.

They want to underscore the importance of that request. They understand that the Airport is considering the request and will be getting back to the representatives who attended that meeting within two weeks.

They would also like to see an independent expert look at noise issues as well. They believe that in situations where environmental issues involving construction are being dealt with, it is important when dealing with environmental and community groups who are concerned about these issues to have independent experts who have the respect of not only the developers but the environmental community as well.

Commissioner Berman asked if her group had a Board of Directors.

Ms. Quirk responded that they do not have a Board of Directors, they have affiliate groups. The Alliance would be happy to provide the Commission with something in writing, which would include signatures of the various group members.

Ms. Susan Deluxe, Tiburon resident, said that they have experienced a dramatic increase in overflights in the last eight months.

They had 173 incidents in May alone, ranging from 90 to 60 decibels.

All of the \$500,000 Runway Reconfiguration Public Relations money, \$1 million consultant fees, and environmental impact legal war chest won't be able to repair the damage that's being done by not including the communities you've made your neighbors in the scoping process.

Money earmarked for public relations and legal fees would be better spent setting up a South Bay, East Bay and North Bay Chapter of the Airport Community Roundtable, creating a regional dialogue and forum for resolving noise issues.

Some areas are saturated with noise and the quality of life is deteriorating while the airlines report record profits. The South and North Bay neighbors find themselves living beneath airplane expressways. Until these flight track noise problems are mitigated, any proposed airport expansion should not get off the ground.

We need to require aircraft manufacturers to design quieter engines that meet more stringent noise standards.

We need to have caps and curfews. Insulating houses near the airport is fine, but what happens when those residents step outside?

Perhaps we don't need 39 daily 737 United shuttle flights to Los Angeles, 22 to



Sacramento and 11 each to Monterey and Eureka. That's 83 planes alone flying over millions of peoples homes every day.

We have allowed the airlines to dictate what our collective quality of life will be. This type of unbridled growth and its multiple negative impacts would never be tolerated as land issues. Why must be tolerate it over our towns everyday forever?

Will we still call it progress when the Bay is reduced to a plane infested puddle and we have to wear earplugs when we go outside?

In the Commission's considerations, overflight noise abatement must be second only to safety if the Bay Area is to remain the place we love to live in.

Commissioner Berman asked Ms. Deluxe if she has brought this to the attention of staff.

Ms. Deluxe responded that she has been to the Roundtable, but that organization only addresses issues adjacent to the Airport.

There was a press conference the other day of Mayors from the mid Peninsula and South Bay wanting access to the Roundtable. Marin County wants access to the Roundtable as well.

The Point Reyes beacon now creates noise issues for areas like Point Reyes, Stinson Beach and western Sonoma County. They have no ability to access this process.

She has been to the Regional Airport Planning Commission and the Oakland Noise Abatement meeting. She is before the Commission today to say that airplane noise is no longer confined to areas adjacent to the Airport. It adversely impacts Marin County as well.

The flight tracks that lead to the airports have become airplane freeways and people living beneath them are suffering.

Mr. Martin said that the Regional Airport Planning Committee was activated in the last six months. They deal with noise on a Bay Area wide basis.

We are committed in our runway planning process to hold stakeholder meetings in Marin County. We will be holding a meeting there within the next 45 days on the scoping for the project.

The Airport has made a committment not to shift noise.

\* \* \*

#### J. CORRESPONDENCE:

There was no discussion by the Commission.

\* \* \*





K. CLOSED SESSION:

Discussion and vote pursuant to Sunshine Ordinance Section 67.11 on whether to conduct a Closed Session.

The Airport Commission voted unanimously to go into closed session. The Commission recessed its public meeting at 9:31 AM and began the closed session.

The Airport Commission will go into closed session in accordance with Government Code Section 54956.9(a) to confer with legal counsel regarding pending litigation entitled the City and County of San Francisco vs ARCO; and, Government Code Section 54956.9(b)(1) to confer with legal counsel regarding potential litigation.


Discussion and vote pursuant to Brown Act Section 54957.1 and Sunshine Ordinance Section 67.14 on whether to disclose action taken or discussions held in Closed Session.

The Commission reconvened its public session at 9:55 AM. The Commission determined that it was not in the public interest to disclose the nature of the closed session and voted unanimously not to disclose it.

\* \* \*

L. ADJOURNMENT:

There being no further calendared business before the Commission the meeting adjourned at 9:57 AM.

  
Jean Caramatti  
Commission Secretary



# SAN FRANCISCO AIRPORT COMMISSION



## MINUTES

June 15, 1999  
9:00 A.M.

✈ ROOM 400 - CITY HALL  
400 VAN NESS AVENUE  
CITY AND COUNTY OF SAN FRANCISCO

WILLIE L. BROWN, JR., MAYOR

## COMMISSIONERS

HENRY E. BERMAN  
President

LARRY MAZZOLA  
Vice President

MICHAEL S. STRUNSKY

LINDA S. CRAYTON

CARYL ITO

JOHN L. MARTIN  
Airport Director

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Minutes of the Airport Commission Meeting of  
June 15, 1999

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# AIRPORT COMMISSION MEETING MINUTES

June 15, 1999

## A. CALL TO ORDER:

The regular meeting of the Airport Commission was called to order at 9:00 AM in Room 400, City Hall, San Francisco, CA.

\* \* \*

## B. ROLL CALL:

Present: Hon. Henry E. Berman, President  
Hon. Larry Mazzola, Vice President  
Hon. Michael S. Strunsky  
Hon. Caryl Ito

Absent: Hon. Linda S. Crayton

\* \* \*

## C. ADOPTION OF MINUTES:

The minutes of the regular meeting of June 1, 1999 were adopted unanimously.

No. 99-0191

\* \* \*

- D. ANNOUNCEMENT BY SECRETARY: In accordance with Section 54957.1 of the Brown Act, Jean Caramatti, Commission Secretary announced unanimous adoption of Resolution No. 99-0190 regarding settlement of a claim from Shine 'Em Up in connection with award of the Shoeshine Concession Lease at the closed session of June 1, 1999.

\* \* \*

## E. ITEMS INITIATED BY COMMISSIONERS:

There were no items initiated by Commissioners.

\* \* \*

## F. ITEMS RELATING TO MASTER PLAN PROJECTS:

Item No. 1 was adopted unanimously.



1. Modification No. 13 to Contract No. 5500E - International Terminal General Construction - Tutor-Saliba/Perini/Buckley - \$10,216,434

No. 99-0192

Resolution approving Modification No. 13 to Contract 5500E, International Terminal General Construction with Tutor-Saliba/Perini/Buckley, A Joint Venture, in the amount of \$10,216,434, for work related to Airline revisions, design changes to facilitate construction, unanticipated conditions and change impact mitigation. Funding sources are current budget and Management Reserve.

Mr. Tom Kardos, Deputy Director, Bureau of Design and Construction explained that this modification is a compilation of negotiated changes covering direct costs associated with airline-initiated revisions, design drawing coordination issues, unanticipated site conditions and change impact mitigation prior to the global settlement approved by the Commission at its last meeting.

As detailed in your agenda package, the funding sources are the contract's current budget, Capital Improvement Program budget and Management Reserve.

All of the changes have been reviewed and approved by the Master Plan Technical Advisory Board. The costs have been included in the cost forecasts presented to the Commission previously in our quarterly reports during the 1998 calendar year. This Commission action formalizes those forecasted changes.

The combined MBE/WBE participation of 33.7% (26.6% / 7.1% respectively) exceeds the City's 15% goal.

Commissioner Strunsky noted that these are brick and mortar changes with the exception of the \$2.7 million impact mitigation. He asked if we are finished with impact mitigation issues up to the final settlement. Is this the last time we will see this type of line item?

Mr. Kardos responded that that is correct. The Commission will see brick and mortar costs.

\* \* \*

G. ITEMS RELATING TO ADMINISTRATION, OPERATIONS & MAINTENANCE:

Item Nos. 2 through 9 were adopted unanimously.

2. SFO Agreements to Fund Wetland Mitigation Projects for Permit #2

No. 99-0193

Resolution approving SFO's Wetland Mitigation Plan Permit #2 and authorizing the Director to enter into agreements to implement the Plan as mitigation for wetlands filled for Master Plan and Capital Improvement projects with a maximum



budget not-to-exceed \$9,500,000.

Mr. John Martin, Airport Director explained that this item approves a maximum budget of \$9.5 million for wetland mitigation. This is relative to 14 acres of wetland fill on Airport property, the largest being the Lot DD site where the Airport will put in long term parking. We expect to extend the AirTrain system to that area as well.

With this \$9.5 million, we will create 37 acres of wetland areas in the Bay, including areas in San Francisco and San Mateo County. We have also committed to 472 acres of wetland enhancement as a part of the funding package.

Overall, the Commission will have approved \$17.7 million for wetland mitigation, and a total of 85 acres of wetland creation for our Master Plan Program.

Commissioner Strunsky asked if the funding is part of the Capital Improvement Plan or the Master Plan.

Mr. Martin responded that it is funded through Capital Projects.

Item Nos. 3 and 4 were called together.

3. Award of Professional Services Contract to Prepare the Environmental Impact Statement (EIS) and Environmental Impact Report (EIR) for SFO's Airfield Development Program - URS Greiner Woodward Clyde - \$1,100,000

No. 99-0194

Resolution awarding a Professional Services Contract to URS Greiner Woodward Clyde to prepare the Environmental Impact Statement (EIS) and Environmental Impact Report (EIR) for SFO's proposed Airfield Development Project, and approving a not-to-exceed budget of \$1,100,000 for Phase 1 of the effort.

Ms. Peg Divine, Deputy Director, Airfield Development explained that this contract is being awarded to URS Greiner Woodward Clyde for environmental studies and EIR and EIS preparation for the airfield development program.

The FAA is the lead agency for the environmental impact statement. San Francisco's City Planning Office of Environmental Review must certify the EIR.

In November 1998 an RFQ was issued to 113 firms, including 37 MBE/WBE firms. The Airport held an MBE/WBE outreach event on December 4, 1998.

The FAA and SFO selected URS Greiner as the most qualified to prepare the EIS and EIR.

Public input on the final scope of work for the draft and final environmental documents and technical studies is crucial. The EIS and EIR will be contracted in three phases. Phase 1 will include public scoping and project definition, Phase 11





will be preparation of technical analyses and the draft EIS and EIR, and Phase 111 will be the preparation of the final EIS and EIR.

URS Greiner is being recommended for all three phases of the EIS and EIR studies. Award of a fixed price contract is being recommended in the amount of \$1,100,000. Prior to the initiation of Phases 11 and 111, staff will return to the Commission for approval.

URS includes the following MBE/WBE firms, Pittman and Hames, Orion Environmental, Geotechnical Consultants, Lahn Group, The Duffy Company and the firms of Impact Sciences and Harris Miller Miller Hanson will assist URS Greiner. The consultant has agreed to 12% MBE and 8% WBE participation goals.

4. Award of Professional Services Contract to Provide Environmental Review and Permit Assistance for SFO's Airfield Development Program - Environmental Science Associates - \$350,000

No. 99-0195

Resolution awarding a Professional Services Contract to Environmental Science Associates to provide environmental review and permit assistance for SFO's proposed Airfield Development Program and approving a not-to-exceed budget of \$350,000 for Phase 1 of this effort.

Ms. Divine explained that this contract will provide environmental advisor and permit assistance for the Airfield Development Program.

Under Federal regulations, the FAA will direct the work of the consultant on the EIS. Under City regulations, the Office of Environmental Review (OER) directs the work of the consultant on the EIR.

The Airport, as project applicant, contracts for these consultant services, but the consultant will be responsible to FAA and OER in the efforts, not to SFO. So, it is desirable that SFO retain an additional environmental consultant to act as our own advisor during this complex process.

The program will require permits from BCDC, Army Corps of Engineers, Regional Water Quality Control Board, and consultations with US Fish and Wildlife, California Department of Fish and Game and the National Marine Fishery Service.

Staff recommends ESA for the three phase effort at a fixed price contract of \$350,000, parallel to Phase 1 of the EIR/EIS effort. Prior to the initiation of Phases 11 and 111 staff will return to the Commission for approval of the negotiated contract amounts.

The consultant has agreed to a 12% MBE and 8% WBE participation goal.

Commissioner Ito appreciated Ms. Divine's efforts to negotiate the MBE/WBE goals.



Commissioner Strunsky asked if there was a time schedule in mind.

Ms. Divine responded that the \$350,000 Phase should take two to three months. We will be going through the Federal and State scoping process, coming up with the project definition, and identifying environmental studies that need to be done. Once that has been completed, Phase 11 will commence.

We are anxious to move quickly, but not so quickly that we haven't fully listened to the public, the scientific community and the environmental community regarding issues that they feel need to be addressed.

Mr. Curt Holtzinger, San Francisco Airport Noise Advisory Community said that his group was disappointed to see this on the agenda today. This is premature and timing could not be worse. A number of environmental groups have asked for an independent analysis of the work to date. A number of public hearings are scheduled to be held through the end of this month. By approving this contract today, the Commission is sending the signal that what other environmental groups have said, their concerns about the work to date, and the public hearings, in essence, do not matter. The Airport is moving full steam ahead.

The work to date is not very well done, specifically, the noise analysis provided by Greiner through the final report, which they had an opportunity to review.

The noise analysis is incomplete, misleading and very difficult to understand.

Mr. Holtzinger read a letter from Mary Griffin, a supporter of the project, regarding Working Paper 111:

"I strongly suggest that the noise analysis in Working Progress Paper 111, including Appendix B be completely revised. The CNEL data should be verified and corrected as needed per the data in the appropriate quarterly noise reports. The revisions should be published as an addendum for review and presentation to the Roundtable before any further work is done as part of the Runway Reconfiguration study. The presentation of noise data and related graphics that are accurate and easy to understand by elected officials and the public is the key to the credibility to the study and the Airport's future efforts to obtain support for the construction."

Mr. Holtzinger said that he finds it amazing that the contract is going to be awarded to someone who has performed inadequate services to date.

Mr. Timothy Treacy, Chairman of the Airport Noise Committee and President of the Forrest Hill Association, a group of 600+ homes located near monitor 26 in San Francisco, echoed Mr. Holtzinger's comments.

He is very disappointed in the Greiner report. The report has completely ignored the existing monitor data and has come up with a model for the noise base which significantly plays down the existing noise levels. They are not even related to the data that is reflected on the noise monitors.

Further, in order to downplay the impact on San Francisco, monitors 50 and 51 have



been included. He does not know where those monitors are located. They don't exist in San Francisco. The results are skewed by those monitors.

Greiner also used a derived forecast of a 1% growth over the next 10 or 11 years. This forecast is used to justify the aspects of the report. The P&D report, which is used to support the need for the project, provides higher forecasts.

Both of these reports have inconsistent forecasts of future air traffic. The forecasts of both reports are at odds with the recorded data the Airport staff provides to the Roundtable. These show a growth over the past five years in commercial jet aircraft operations of some 15.5%. This is very different from Greiner's 1% annual growth, or P&D's 1.5 to 3% growth.

We also do not know the aircraft mix that is being used.

Another problem that is not addressed by Greiner is that nighttime operations have increased substantially over the past five years according to the Airport's own operating figures. Over the past five years, nighttime departures have increased in excess of 50% and nighttime arrivals have increased 97%.

One section of the Greiner report deals with operational safety. In June of 1998 a fully loaded 747 nearly crashed on take-off from Runway 28. According to the FAA it came within 100 feet of hitting San Bruno Mountain. It also flew over portions of San Francisco while it was out of control. That incident was covered up by both the FAA and United Airlines. United has refused to respond to inquiries regarding the specifics of this incident. The problem appeared to be a combination of aircraft equipment failure and the crew.

Under the Airport's proposal, there will be large numbers of this type of aircraft flying over San Francisco's residential areas. The Greiner report does not consider this problem at all.

Peninsula communities have protested and raised the issue with the Roundtable, using it as an argument to shift these aircraft over San Francisco. The Airport's plan goes along with this.

By flying these large aircraft over San Francisco neighborhoods, the safety of the residents will be threatened. Further, the value of their homes will be seriously eroded and life will be made unliveable.

Although they have participated fully in this process and have filed comments to the P&D report, they were excluded from the reports comment section. He contacted P&D to find out why their comments were excluded. He did not receive a response. He contacted Airport staff but received no response other than to be told that there will be public hearings during which time their concerns could be stated. Their comments are not being considered.

They have three concerns ... their home values will be eroded, their environment will be destroyed, and their families will be placed at risk through the possibility of accidents.



The Greiner report suggests that measures will be taken somewhere along the line to insure that these planes don't fly over neighborhoods. They know that routes are determined by the FAA, not the Airport staff.

Until this issue is satisfied and effective mitigation is proposed, they are opposed to an extension of Runway 1 under the present proposed reconfiguration.

Commissioner Berman asked Mr. Martin to comment to the lack of response.

Mr. Martin responded that if Mr. Treacy was told by the consultants and/or staff that their comments are simply being excluded, that is not proper. The final report will be amended to reflect his comments.

Ms. Jane Morrison, President of San Francisco Tomorrow and speaking on behalf of the Alliance for Clean Water (an alliance formed by 18 environmental organizations, including Baykeeper, Coalition for Better Wastewater Solutions, Communities for a Better Environment, the Dolphin Club, Golden Gate Audubon, Mission Creek Conservancy, San Francisco League of Conservation Voters, Southeast Alliance of Environmental Justice, Sustainable San Francisco and San Francisco Tomorrow) thanked Mr. Martin for meeting on May 20 with leaders of the environmental community to provide an update on the Runway Reconfiguration Program and to discuss the next step for the environmental review and public information process.

The importance of involving an independent environmental expert was discussed at that meeting to assess the impacts of the runway reconfiguration on the Bay ecosystem. The expert would be acceptable to both the environmental community and the Airport, and would be knowledgeable about water quality, Bay tidal flow and noise abatement. Such an arrangement would help to assure an objective debate with a greater degree of certainty on actual impacts to the Bay. The work would be funded by the Airport.

They were encouraged by Mr. Martin's willingness to consider providing this assistance to the environmental community. These consultants will assist their organizations to fully and fairly review and participate in the environmental review process and provide some measure of peer review to the work produced by the Airport's consultants.

It is their understanding that Mr. Martin will consider this matter and respond promptly. Their representative discussed this during the public comment period of the June 1 Airport Commission meeting and they look forward to discussing this further with Mr. Martin.

Mr. Martin explained that the Feasibility Study that was completed in May did not address all of the planning and environmental issues. It was not intended to be a complete planning document, or an EIR or EIS document. It was simply a feasibility study.

Undertaking a feasibility study before beginning a formal planning effort was an extraordinary step by the Airport. This is not the way that most public entities begin.







The Commission has not yet approved the contract with the firm who will do the formal planning work. We expect to bring that contract to the Commission in July. We know that a lot more work needs to be done with the communities, the airlines, and the FAA in addressing all of the questions. We are committed to continuing to work closely with all of the parties to see that all questions are addressed. We are also committed to working with the Planning Department that will be responsible for the CEQA document, and with the FAA that will be responsible for the NEPA document to insure the complete review of all environmental questions.

We know more time will be needed for the preparation of these documents than was given to the preparation of the feasibility study, which we completed in 12 months.

He reminded the Commission that about a month ago they adopted a resolution stating that they would not approve any runway reconfiguration plan that would result in a shift in noise to San Francisco. He has also committed to the San Francisco Noise Committee his interest in working towards reducing noise in San Francisco. We already have our consultants doing modeling work in this regard.

The FAA cannot make a commitment at this time to establish new flight procedures. He understands the concerns of the communities, however, the FAA must adopt new flight procedures relative to runway reconfiguration in the context of a formal environmental document. They must have a formal NEPA document for any change in established aircraft flight routes.

In conjunction with the FAA NEPA document, the FAA must address any changes in the established flight routes. That will also have to go before the City Planning Commission and the Airport Commission for approval. Once established, the FAA cannot change flight procedures without undertaking a new environmental document.

In his 18 years with the Airport, the FAA has never undertaken any change in flight routes.

Commissioner Berman noted that this is not the final resolution of this issue.

Mr. Martin said that the formal planning effort is just beginning and we are entering the formal environmental review process.

Commissioner Strunsky asked why we aren't proceeding with both on a parallel track.

Mr. Martin said that there are legitimate concerns and there will be negative fall-out if this is not done properly. We have to make sure that there will not be an increase in noise over San Francisco.

Commissioner Mazzola asked if the comments made by Mr. Treacy and Mr. Holtzinger will be entered into the document.

Mr. Martin responded that he is committed to fully addressing all concerns and questions and that they will be incorporated into the formal planning and environmental review process.



Commissioner Strunsky asked for a briefing in the near future regarding some of the points made today, such as the inaccuracy of the Greiner report and the issues involved.

Commissioner Ito agreed.

Mr. Martin said that he will schedule the briefings as well as respond to the request by the environmental communities for funding to track work on the runway plan.

Commissioner Berman again noted that this is just the beginning of the process and that there will be opportunity for open public comment.

5. Award of Runway Reconfiguration Public Relations Contract - Solem & Associates  
\$250,000

No. 99-0196

Resolution awarding the Runway Reconfiguration Contract for Public Relations Services to Solem and Associates, for an amount not to exceed \$250,000.

Mr. Tom Gwyn, Airfield Development said that the Runway Reconfiguration Program will continue to generate considerable public interest and scrutiny. The function of the public relations plan is to facilitate the Airport's ability to provide information frequently to the public and the various communities throughout the Bay Region that feel impacted by Airport operations, as well as provide venues and situations where the Airport staff can listen to feedback by the communities as we go through this environmental review process.

The scope of work for this contract will include recommending communication strategies and assisting us with material distribution. We have discussed a quarterly newsletter that will be made available to the public, how we access the media as a resource of information to inform the public about the status and progress of the environmental review for the runway project, recommending strategies for regional outreach to opinion leaders and community groups throughout the region who have concerns about the operations at the Airport.

Airport staff issued a Request for Qualifications to approximately 65 firms, including qualified MBE and WBE firms certified by the Human Rights Commission. Twenty firms responded to that RFQ. A panel of Airport staff selected five firms that they considered to be clearly qualified. A second panel interviewed the five qualified firms, including two WBE firms and one MBE firm, and made their evaluations.

Staff recommends award to Solem & Associates.

Commissioner Berman was concerned that it was an open-ended contract.

Mr. Martin responded that this is a time and materials budget and he did not expect it to change from year to year. Hopefully, we will come in under budget for this year.



Mr. Gwyn added that it is structured to allow the Commission to review the second year portion of the contract.

Mr. Martin said that we followed the same model used for the Architectural/Engineer and Construction Management contracts for the Master Plan where we have an overall budget for the entire time period for the firms but we return to the Commission each year for the appropriation of funding.

6. Authorization to Conduct a Pre-bid Conference for the Foreign Currency Exchange Lease for the New International Terminal Complex and Current Terminal Buildings

No. 99-0197

Mr. Bob Rhoades, Deputy Director, Business explained that in the existing International Terminal, Foreign Exchange Currency services are provided by TeleTrip and Bank of America. Collectively, they pay the Airport an annual rent of just over \$1 million.

After extensive research, staff recommends that the Foreign Currency Services agreement in the new International Terminal be exclusive.

This item seeks Commission authorization to hold a pre-bid conference for the agreement. The proposed term is for five years. The minimum annual guarantee is \$3 million.

As a result of a comment made at a previous meeting, we have researched the automated currency exchange machines. They are currently used more extensively in Europe. They accept up to 20 different currencies but can only dispense three different currencies. This possibility will be discussed at the pre-bid conference.

Commissioner Strunsky noted that there did not appear to be a location at the arrivals area of the new International Terminal.

Mr. Rhoades responded that that is a possible location for a machine.

Commissioner Strunsky thought that that would be a logical location.

7. Approve Inclusion of Language to Hotel and Food and Beverage Concession Leases Consistent with the City and County of San Francisco's "Card Check Ordinance" No. 990298

No. 99-0198

Resolution approving language to be included in the Hotel and Food and Beverage Leases that is consistent with the City and County of San Francisco's "Card Check Ordinance" No. 990298 requiring certain labor representation procedures in hotel or restaurant development projects in which the City has a proprietary interest,



regardless of the number of employees employed by the concessionaire.

Mr. Rhoades explained that in February of this year the City adopted an ordinance requiring certain labor representation procedures in all hotel and restaurant developments in which the City has a proprietary interest.

The ordinance seeks to minimize the risk to the City that may arise out of union organizing campaigns in hotel and restaurant projects in which it has an interest.

We are proposing that this language be added to the leases for the food and beverage program in the new International Terminal. Under the existing food and beverage lease in the existing terminal complex, all of the employees are unionized, including the employees of the DBE businesses under the Host master lease.

We are viewing the new International Terminal food and beverage program as being the same as the Host program, with the caveat that there will be 12 to 15 different leases within the building under one comprehensive program.

We propose to broaden the language of the ordinance which was actually directed towards restaurant and hotel operations with a minimum of 50 employees. We are proposing to extend this to the entire food and beverage program, regardless of the number of employees for that particular entity.

We believe that this particular issue should be addressed now as it creates a level playing field. It informs all of the interested parties for this program of what is expected from them so that they can make the proper decisions from a business point of view.

Commissioner Strunsky asked if someone could object because the resolution has been passed after a bid was submitted.

Mr. Rhoades responded that we have not received any bids. We have only gone through Phase 1, which was a general solicitation of interested parties. We are currently in Phase 11, which is not a final selection.

Mr. Martin said that the Commission's approval at this time will help to maintain a level playing field.

8. Award of Professional Services Contract for Development and Implementation of a Public Relations Campaign to Open the New International Terminal - Reputation Management - \$540,000

No. 99-0199

Resolution awarding a Professional Services Contract for the development and execution of a Public Relations and Community Outreach Campaign to open the new International Terminal to Reputation Management, a certified WBE, in an amount not to exceed \$540,000 for 18 months.





Mr. Peter Nardoza, Deputy Director, Public Affairs explained that this is the second and final major contract that Public Affairs will have for the opening of the new International Terminal.

9. Adoption of Fiscal Year 1999/00 Rates and Charges

No. 99-0200

Resolution (1) establishing aircraft landing fee rates, minimum landing fee rates, terminal space rental rates, cargo space rental rates, outdoor aircraft storage rates for commercial aircraft, outdoor storage rates for general aviation aircraft, jet bridge rental rates, in-transit lounge rental rates, sewage/wastewater treatment rates, water rates, trip fees for consolidated on-Airport rental car shuttle bus service; and (2) requesting supplemental appropriation.

Mr. Marcus Perro, Deputy Director, Finance explained that each year staff must compute aircraft landing fees and terminal rental rates in accordance with the Airport/Airline Lease and Use Agreement. The computations for FY 1999/00 have been completed. Staff has computed an aircraft landing fee of \$1.84 per thousand pounds of aircraft is necessary to support the Airport's expenditure plan for 1999/00.

Total Airport payments combined represent 36% of the Airport's income and are below the Airport/Airline Master Plan Memorandum of Understanding to establish airline fees at \$125 million in 1995 amounts for FY 1999/00. The other 64% of the Airport's income will be paid for by concession revenue, building and ground rentals, interest and miscellaneous income and user fees on Airport facilities and services.

Consistent with past practice and Commission policy, the Airport proposes to establish user fees for Airport facilities and services. This rates and charges package includes increases for aircraft minimum landing fees, general aviation outdoor aircraft storage fees, cargo building rental rates, in-transit passenger lounge fees and sewage treatment fees. Staff is not proposing to increase water delivery rates or the use for jet bridges in the South Terminal because we have achieved full cost recovery for those facilities and services at this time.

In addition, staff is requesting higher trip fees for rental car shuttle bus service to the rental car facility.

Later in FY 1999/00 we will return to the Commission with a recommendation to adjust the fees for other ground transportation operators.

Commissioner Berman asked if these rate changes have been negotiated with the lessees.

The airlines have approved the rate changes, and the rental car industry is in agreement with the rate changes. We are required to give 30 day notice to the other tenants affected by the changes.



Commissioner Strunsky asked if the 36% has increased or decreased over the past two years.

Mr. Perro responded that it has increased over time as a percentage of our gross revenue. Last year it was approximately 33%. As early as 1992 it was averaging 25% to 27% for several years. When we began incurring costs for the Master Plan and could not capitalize the roadways, the airline share began to increase.

Mr. Martin said that in 1981 the airlines paid 51% of the total balance sheet. We lowered it through the 1980s. The airline share will go up with the debt service for facilities, and then drop back down again. Most US airports charge airlines between 45% and 55%.

We are following an MOU with the airlines for their costs for the target year 2000 and we are meeting the projections.

\* \* \*

#### H. CONSENT CALENDAR OF ROUTINE ADMINISTRATIVE MATTERS:

Item Nos. 10 through 20 and 22 through 30 were adopted unanimously. Item No. 21 was removed from the calendar.

Commissioner Mazzola asked that in the future the Retirement Resolutions be taken out of the Consent calendar.

10. Modification No. 2 to Contract No. 5900 - Elevated Circulation Roadway - Parsons-OPAC-AGS - \$170,000

No. 99-0201

Resolution approving Modification No. 2 to Professional Services Contract 5900, Elevated Circulation Roadway, with Parsons-OPAC-AGS to provide Design Development and Contract Documents for the Traffic Guide Signing & Graphics project in the amount of \$170,000.

11. Modification No. 3 to Contract 5706 - AirTrain Domestic Terminal Stations Professional Services Agreement - Kwan Henmi Architecture and Planning - \$163,000

No. 99-0202

Resolution approving an increase to basic professional services fees for Contract 5706, AirTrain Domestic Terminal Stations, with Kwan Henmi Architecture and Planning, in the amount of \$163,000 to provide full architectural and engineering services for additional scope of work for AirTrain Domestic Terminal Stations. Funds are available in the existing project budget with no impact to the Master Plan Baseline Budget.



12. Retirement Resolution for Mr. James Baiss  
No. 99-0203
13. Retirement Resolution for Mr. Bernard Davey  
No. 99-0204
14. Retirement Resolution for Mr. Gary Fehman  
No. 99-0205
15. Retirement Resolution for Mr. Robert Wrobel  
No. 99-0206
16. Request for Proposals for Technical Planning Studies for the Airfield Development Program  
No. 99-0207                      Resolution authorizing issuance of Request for Proposals for Technical Planning Studies for the Airfield Development Program, including airspace, capacity and land transportation analysis.
17. Modification No. 4 to Agreement with the Airport/Community Roundtable - \$120,000  
No. 99-0208                      Resolution approving Modification No. 4 to the Airport/Community Roundtable consultant agreement to provide for an additional \$120,000 in funding.
18. Authorization to Issue a Request for Proposals for Project Manager and Technical Consultant - Aircraft Noise Management System  
No. 99-0209                      Resolution authorizing a Request for Proposals for a Project Manager and Technical Consultant to oversee the design, acquisition, installation, and testing of a new comprehensive and enhanced aircraft noise management system.
19. Modification No. 3 to Contract 5650B - Quick Turn Around (QTA) - Dennis J. Amoroso Construction Co/Marinship Construction Services. A Joint Venture - \$99,650



No. 99-0210

Resolution approving Modification No. 3 to Contract 5650B, Quick Turn Around (QTA) at Rental Car Facility on Lot D, with Dennis J. Amoroso Construction Co/Marinship Construction Services, A Joint Venture in the amount of \$99,650; accepting the work as complete and authorizing final payment and closeout.

20. Award of Professional Services Contract for the Development, Redesign, and Hosting of the Airport's Website - USWEB/CKS - \$75,000

No. 99-0211

Resolution awarding a Professional Services Contract for the Development, Redesign, and Hosting of the Airport's Website to USWEB/CKS, a multi-national Internet marketing firm headquartered in San Francisco, for not more than \$75,000 in Phase I, and an amount to be determined in Phase II (final project scope, budget, and implementation of project work plan).

Commissioner Strunsky hoped that the website will provide arrival/departure times.

Mr. Martin responded that it is a very high priority with him. We would also like to work with the hotels to provide that information via a specific channel on television sets.

21. Award of Professional Services Contract to Produce an Airport Security Identification Display Area (SIDA) Training Video - Fat Box - \$70,000

22. Authorization to Seek, Accept and Expend Funds from the Bay Area Air Quality Management District for Compressed Natural Gas (CNG) Vehicles

No. 99-0212

Resolution authorizing Airport staff to seek, accept, and expend funds from the Bay Area Air Quality Management District to conduct a demonstration program providing an incentive for hotels, off-Airport parking firms, and other ground transportation providers to add clean Compressed Natural Gas vehicles to their fleets.

23. Request for Proposals for a Professional Services Contract to Implement Airport Survey Work

No. 99-0213

24. Bid-Call - Contract No. 3250 - Emergency Cement Masonry Repair





- No. 99-0214 Resolution approving the scope, budget, and schedule for Contract 3250, Emergency Cement Masonry Repair, and authorizing the Director call for bids when ready.
25. Bid-Call - Contract No. 3797 - Utilities Cathodic Protection Improvement
- No. 99-0216 Resolution approving the scope, budget and schedule for Contract 3797, Airport Utilities Cathodic Protection Improvement, and authorizing the Director to call for bids when ready.
26. Memorandum of Understanding between the County of San Mateo and the Airport Commission for Processing Airport Parking Citations
- No. 99-0216 Resolution authorizing staff to enter into a memorandum of understanding with the County of San Mateo Sheriff Department to Process Airport Parking Citations.
27. Acquisition of Noise Easements as Part of the County of San Mateo's Aircraft Noise Insulation Program
- No. 99-0217 Resolution authorizing a \$220,472 payment for the acquisition of Noise Easement for nine dwellings and four churches in unincorporated San Mateo County.
28. Rental Credit to Reimburse Delta Airlines for the Cost of Window Coverings in the South Terminal
- No. 99-0218 Resolution approving a rental credit to Delta Airlines in an amount not to exceed \$29,000 for the installation of window coverings across from the Delta and Northwest ticket counters in the South Terminal.
29. Reimbursement to United Air Lines on Behalf of Its Subtenant, Dobbs International Services, for Removal of Abandoned Utilities and Environmental Remediation on Plot 7X
- No. 99-0219 Resolution authorizing reimbursement in the amount of \$63,141 to United Air Lines, for utilities removal and environmental remediation performed on Plot 7X by United's subtenant, Dobbs.



International Services, less \$26,433 previously  
invoiced to United for a related matter.

30. Contract with the Corporation of the Fine Arts Museums Conservation Laboratory  
\$100,000

No. 99-0220

Resolution approving contract for \$100,000 with  
the Corporation of the Fine Arts Museums  
(COFAM) Conservation Laboratory for  
conservation services.

\* \* \*

I. NEW BUSINESS:

This is the "Public Comment" section of the calendar. Individuals may address the Commission on any topic within the jurisdiction of the Airport Commission for a period of up to three (3) minutes. Please fill out a "Request to Speak" form located on the table inside the entrance to Room 428 and submit it to the Commission Secretary.

Mr. Curt Holtzinger, Airport Noise Committee explained why they were so concerned about the noise shift through the use of graphs. He explained that the shift in noise is clear for Alternative F2. There will be a similar shift with Alternative BX.

If one of these preferred alternatives is adopted, the Commission will be violating its own policy on shifting noise. The community is being asked to trust that the FAA will solve the problem. They are looking for legally enforceable agreements.

Commissioner Strunsky asked who prepared the graphs.

Mr. Holtzinger responded that these graphs are from the final report.

Commissioner Strunsky asked if those areas are out in the middle of the Bay.

Mr. Holtzinger responded that the contours are in the Bay but the noise does not stop there, it continues.

The point analyses at the various monitoring stations in San Francisco, the decible increases are up to 15 decibles, which is more than a doubling of noise.

Without legally enforceable agreements and in-flight procedures, the communities will have nothing to fall back on if the airlines fail to abide by the procedure.

He took exception to the final report where it stated in the Executive Summary: "The preferred alternatives will not shift noise from one community to another." That is not true. The Airport is hoping that the FAA and some other agencies will come to the rescue and prevent the noise shift. The Commission needs to take responsibility for its actions.

He will be happy to meet with Commissioner Strunsky to review the data, show the



deficiencies in the report, and how their issues have not been addressed.

Ms. Amy Quirk, Alliance for a Clean Waterfront asked for a transcript or tape recording of today's proceedings.

The Director responded that either one can be provided.

Mr. David Hooper, Atherton resident, said that on May 17, 1999 he sent a report to the Commission via E-mail through the webmaster. He provided a copy of the report (see attached).

He took a number of readings around SFO using the Global Positioning System (GPS) to see how accurate it is and found only 3 or 4 meters of error on open sites. He also went to San Carlos Airport and Palo Alto Airport and got very good numbers.

Digital highways in the air can be recorded through GPS. These highways can be shifted around. This might lessen noise.

He asked the Commission to look the report over.

Mr. Martin asked Mr. Ron Wilson to speak with Mr. Hooper after the meeting and provide him with a full briefing in writing, and an opportunity to meet with staff. Mr. Wilson is familiar with the operational issues of the Airport and should be helpful.

Commissioner Strunsky said that he liked the idea but did not know if it is within our purview.

Mr. Martin responded that we have been tracking the GPS issue.

Ms. Morrison asked to what extent the Airport has explored the opportunity to use other airports as an alternative to filling in the Bay.

Mr. Martin asked Ms. Peg Divine and Mr. Tom Gwyn to fill Ms. Morrison in on this issue. The Airport is working with the Regional Airport Planning Committee and the Metropolitan Transportation Commission on an update to the Regional Airport System Plan. We recognize that the aviation needs of the Bay Area must be addressed on a Bay Area-wide level.

Ms. Morrison suggested that it might be worthwhile for the Airport to spend time promoting high speed rail.

Mr. Martin said that the Commission has supported high speed rail. Last Friday he attended a meeting in Los Angeles with the LAX, San Jose and San Diego Airport Directors who are all supportive of high speed rail.

\* \* \*



J. CORRESPONDENCE:

There was no discussion by the Commission.

\* \* \*

M. CLOSED SESSION:

Discussion and vote pursuant to Sunshine Ordinance Section 67.11 on whether to conduct a Closed Session.

The Airport Commission voted unanimously to go into closed session. The Commission recessed its public meeting at 10:05 AM and began the closed session.

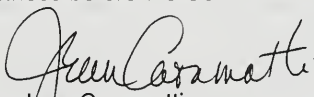
The Airport Commission will go into closed session in accordance with Government Code Section 54956.9(a) to confer with legal counsel regarding pending litigation entitled ATA v City and County of San Francisco and Airport Commission, GTE Mobilnet v Airport Commission, and Associated Builders and Contractors, Inc. v Airport Commission; and Government Code Section 54956.9(b)(1) to confer with legal counsel regarding potential litigation.

The Commission reconvened its public session at 10:28 AM. The Commission determined that it was not in the public interest to disclose the nature of the closed session and voted unanimously not to disclose it.

\* \* \*

L. ADJOURNMENT:

There being no further calendared business before the Commission the meeting adjourned at 10:30 AM.

  
Jean Caramatti  
Commission Secretary





From: Webmaster@ci.sf.ca.us  
Date: Mon, 17 May 1999 10:37:41 -0700  
To: vgps@jps.net  
Cc: lynne\_osmus@faa.gov, dlewis@savesfbay.org,  
totton.heffelfinger@sierraclub.org, druddock@earthlink.net,  
essencetech@execpc.com  
Subject: Re:SFO Runway Expansion Project

Hi.

Your message has been forwarded to the Airport.

Webmaster (JS)

-----Reply Separator-----  
Subject: SFO Runway Expansion Project  
Author: vgps@jps.net  
Date: 5/17/99 10:14 AM

Webmaster,

As per your instructions on your website, please forward this E-mail and attachments to the proper party at the San Francisco Airport Commission. Please acknowledge receipt of this communication by return E-mail. Thank you,

David Hooper E-mail vgps@jps.net

San Francisco Airport Commission,

Attached to this E-mail is a proposal detailing an alternative to the estimated 2 billion dollar airport expansion plan for the San Francisco International Airport. This alternative would make use of the Global Positioning System (GPS) and the cost would be orders of magnitude less than the proposed runway expansion. Preliminary testing has shown that aircraft could use GPS to land in poor visibility and maintain safe separation.

I would ask that this proposal be put on your agenda for discussion and consideration at your next public meeting and that I be notified of the date, time and place of the meeting.

The attachments are text files and the font is Courier New, 9 point and should be readable by any text editor. There is no embedded or hidden formatting contained within the documents.

Thank you,

ALTERNATIVE TO SAN FRANCISCO INTERNATIONAL AIRPORT RUNWAY EXPANSION

David Hooper



To: webmaster@ci.sf.ca.us  
From: vgps@jps.net  
Subject: SFO Runway Expansion Project  
Cc: lynne\_osmus@faa.gov, dlewis@savesfbay.org, totton.heffelfinger@sierraclub.org,  
druddock@earthlink.net, paul  
Bcc:  
Attached: A:\SFOprops.txt; A:\Appendix.txt;

Webmaster,

As per your instructions on your website, please forward this E-mail and attachments to the proper party at the San Francisco Airport Commission.  
Please acknowledge receipt of this communication by return E-mail.  
Thank you,

David Hooper -E-mail,vgps@jps.net  
211 Stockbridge Ave,  
Atherton, Ca. 94027  
Tel. 650-363-0881  
San Francisco Airport Commission.

Attached to this E-mail is a proposal detailing an alternative to the estimated 2 billion dollar airport expansion plan for the San Francisco International Airport. This alternative would make use of the Global Positioning System (GPS) and the cost would be orders of magnitude less than the proposed runway expansion. Preliminary testing has shown that aircraft could use GPS to land in poor visibility and maintain safe separation.

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Thank you.



David Hooper

## INTRODUCTION

San Francisco International Airport (SFO) plans to add new runways by filling a portion of the San Francisco Bay to accommodate the new runways. The present parallel runways cannot land two aircraft simultaneously in poor visibility. This can result in delays and disruption to aircraft schedules at SFO and throughout the USA.

The latest proposed cost would be approximately 2.0 billion dollars. Much of the money would be used to buy up land bordering the bay to be kept or returned to its natural state to offset the environmental and ecological damage done by filling in the part of the bay.

There may be a technology fix that would allow SFO to use the present parallel runways in poor visibility, thus eliminating the need for additional runway expansion, expense and environmental disruption. This fix would make use of the Global Positioning System (GPS) to land aircraft simultaneously on the parallel runways in poor visibility.

## SFO RUNWAY CONFIGURATION AND GPS

The present parallel runways are 200 feet wide and spaced 750 feet apart, center to center. With the advent of the newer European Airbus aircraft with a wing span of 80 meters (262.5 ft.), the distance or clearance between wing tips of two Airbuses on the parallel runways would be 487.5 feet. The question then becomes, can GPS adequately maintain a safe separation between two aircraft while on approach in the clouds and landing on the parallel runways in the fog?

For civilian uses, the owner of the GPS system (Dept. of Defense) degrades the GPS signal so that receivers can only get a fix with an error of up to 100 meters (328 ft.) in X and Y and several hundred meters in Z. In the above-mentioned wing tip clearance, this would only leave a clearance of 159 feet. Too narrow a separation to safely navigate.

## DIFFERENTIAL GPS

However, these degraded signals can be corrected by broadcasting the difference in position between a known location and the GPS reported position for that location. These broadcast correction signals in turn can be received by an aircraft's on board GPS receiver and the correction applied to the aircraft's GPS position. This technique is known as differential GPS (DGPS). Thus 100 meter X-Y errors become approximately 3-6 meter horizontal errors and several hundred meter Z errors become approximately 15-20 meter vertical errors. The Z error values are usually 2-3 times the X-Y errors.

The U.S. Coast Guard has recognized the navigation potential of these correction signals and established DGPS radio beacons along the coasts of the U.S.A. In the San Francisco Bay region we are beneficiaries of two such beacons located at Pigeon Point, Ca. south of Half Moon Bay and Blunt Point located on Angel Island in San Francisco Bay. These DGPS signals are piggy-backed on existing Coast Guard low frequency radio beacon signals and can be received up to 180 miles away for Pigeon Point and up 59 miles for Blunt Point. Thus SFO is well within the reception area of both stations.

## TESTING CONFIGURATION

In order to test these accuracy assumptions, a GPS system with differential capabilities capable of tracking up to 12 satellites simultaneously, a computer and suitable software were taken into the field to gather observations. The GPS receiver outputs a position every second. Sets of readings were taken at KNOWN locations around three sides (north, west and south) of SFO for 7.5, 15 and 30 minute intervals, i.e., 450, 900 and 1800 readings each. A set of observations were made for both Pigeon Point and Blunt Point as the source of the differential corrections for each site.

Sets of readings were taken using the known X-Y-Z value of the position and also determining an average X-Y-Z position for the site. For each set of readings, the observations were summed and averaged, a root mean square error (RMSE) computed and the minimum and maximum values were differenced from the average and known point for each coordinate. Sets of readings were taken at Pigeon Point, Ca., Canada College, Redwood City, west end of San Mateo Bridge, Candlestick Park, Skyline Blvd. at Hayne Rd., San Carlos Airport, Palo Alto Railway Station, and Palo Alto Airport. Ideally, two known



points exist on SFO property in proximity to the runways, but entry was denied for unknown security reasons.

#### TEST RESULTS

Appendix 1 shows a detailed listing of all test results for all sets of observations at all sites. These are summarized in meters as follows:

Place	Largest X Min/Max Value	Largest Y Min/Max Value	Largest Z Min/Max Value	Largest Difference Between Known & Average Positions			Viewing Conditions
				X	Y	Z	
Pigeon Point	4.563	-5.091	-15.558	-0.525	-1.295	-6.66	Few trees
Canada College	2.835	-3.733	-12.100	0.803	-1.383	-3.65	Open
San Mateo Bridge	-7.881	10.063	-18.110	0.542	1.201	-9.99	Abutments
Candlestick Park	-4.676	3.681	-10.400	-0.911	1.507	-4.98	Shaft
Skyline Blvd.	-3.730	4.853	-11.780	1.488	1.146	-7.66	Open
San Carlos Airpt	3.479	4.107	-9.102	0.683	1.051	-6.49	Open
Palo Alto RR Sta	-6.635	9.540	-21.494	-1.524	-1.800	-7.25	Trees
Palo Alto Airpt	-3.341	-3.111	-9.900	0.733	-1.346	-3.55	Open

#### SATELLITE GEOMETRY

For the determination of a two dimensional (X-Y) fix, the observations from at least three satellites must be used, and for a three dimensional (X-Y-Z) fix, there must be at least four. An examination of Appendix 1 shows that for all readings there were at least six satellites used and up to nine in some cases. Of the 24 satellites in orbit around the earth, a theoretical maximum of 12 could be available under ideal conditions at any one time.

GPS signals are in the gigahertz range and are best used in line of sight conditions. Satellites should be widely dispersed about the 360 degree horizon with elevations between 25 and 45 degrees for best reception and triangulation determinations of position. This minimizes interference from terrain and long travel times through the earth's ionosphere. The test points were selected from the National Geodetic Survey's database of GPS control points. Some of these points were established before the advent of GPS and consideration was not given to the optimum placement of the point for viewing with GPS equipment.

#### ERROR ANALYSIS

The above table shows the largest deviations from the average or user known point for each site. For X-Y values, the largest deviation was 10.063 meters (34.8 ft.) for all observations (100,800) for all sites. The SFO parallel runways are oriented roughly south to north. X values increase from west to east and Y values from south to north. A deviation of 34.8 feet for both Airbuses would reduce the wingtip clearance between them from 487.5 to 414.3 feet in the worst possible case. However it would be expected that the separation would NOT bring the wing tips 69.6 feet closer, as both aircraft's GPS positions at the same instance in time would show approximately the same bias in the same direction, thus both pilots would orient their craft to the westward to maintain their 487.5 foot separations while descending through the clouds.

It should be pointed out that GPS readings are subject to partial blockage and multipath errors. Blockage can be caused by nearby structures and vegetation. Multipath is caused by signals that reflect off of nearby objects before reaching the GPS receiver, thus taking a longer time and path to reach the receiver and introducing error into the position calculation for that instance. For example, the X-Y observations (the highest) for the west end of the San Mateo bridge were partially obstructed by the bridge itself and by passing semi-trucks and one or both may have introduced multipath errors into the GPS reported positions.

The state of the ionosphere can also introduce error into the reported positions. If the ionospheric states are appreciably different between the position of the GPS receiver and the location where the differential corrections signals are broadcast, then error can be introduced. An examination of Appendix 1 shows no discernible bias between the datasets using corrections from Pigeon Point and Blunt point.

It can be seen from the table above that the sites marked "open" and "airpt" have the





lowest errors as there was no obscuring vegetation or objects to introduce multipath error. Therefore an aircraft at altitude or landing in a clear environment such as an airport like SFO would also approximate the errors for those errors listed for the airport sites in the table above. The table also indicates that the largest X-Y error between a known position and its GPS average at that point is -1.800 meters (5.91 ft.). Thus an aircraft at any other position between Palo Alto airport and Candlestick could expect its position to be within an average of 5.91 feet of a known position at that point and at that moment in time. Extremes from that X-Y position should not vary by more than 10.063 meters but probably be in the range of the extremes for the two airports which more likely represent an aircraft at altitude.

#### AIRCRAFT TESTING

Given a set of digital coordinates for the approach and landing, the question remains, can the pilots orient their aircraft with sufficient accuracy to maintain adequate clearance (487.5 ft.) between aircraft during a simultaneous approach and landing in the clouds and fog? The only way to test this hypothesis is with actual aircraft testing. A test plan can be devised, using regularly scheduled flights into SFO, that will answer this question while maintaining safety and adhering to FAA flight rules and keeping costs to a minimum. The costs for these tests would be 4 orders of magnitude less than the projected 2.0 billion dollars for the runway expansion project.

Two participating flights from the same or different airlines would be needed whose flight arrival times at SFO are close to the same. These aircraft would have to be equipped with FAA approved Real Time Kinematic or Differential GPS receivers. As the FAA has mandated that all airlines eventually equip their aircraft with GPS, this would NOT be an added expense, only an expense that is incurred at an earlier than anticipated time frame.

#### COMPUTER EQUIPMENT AND SOFTWARE REQUIREMENTS

A computer interfaced to the aircraft's GPS system would be needed to monitor the flight's progress and show the pilot his/her location and deviations from the expected position in any instance of time. Suitable software would have to be written, some of which is already written. Cartographic data would have to be generated for the digital approach. This could be done by mathematically projecting the X-Y coordinates of the ends of the runway at the same angle as the runways out from the ends of the runways as many miles as the participating pilots would deem necessary for their approach and landing. The pilots could in turn use the software to digitally record X-Y-Z values during a typical approach and landing. New Z values could then be interpolated from the GPS X-Y-Z values and inserted into the corresponding X-Y values of the mathematically projected approach. This has the advantage that the X-Y values would be exact and only the Z values would have been subjected to GPS errors. Alternatively, the pilot could use a typical digitized approach as their pathway. In this case all three axes would have been subject to GPS errors but within reasonable errors as shown in the table above.

#### LOCATING THE DIGITAL APPROACH

Software would display a digital image map (DIM) of the airport region with the digitized approach displayed on the DIM and the pilot's position displayed as a blinking cross. The pilot would fly the cross to the displayed digital approach, adjust his/her altitude to match that indicated at that position, and begin descent to the airport. A DIM is a digital image that has been geo-referenced to a map coordinate system and has had all errors, of tip, tilt, rotation and relief displacement at time of exposure, differentially removed (pixel by pixel) by a rigorous mathematical process so that the resulting DIM has the same or better accuracy than a digitized paper map of the same area and scale.

#### AERIAL TESTING

Testing could begin by having the participating pilots fly the digital approach as accurately as possible in daylight hours, in good visibility conditions and during a normal arrival at SFO. The pilots would note their separation from the adjacent flight and what their computer screens showed them. If they reported after several flights that they could not fly the digital approach accurately enough to maintain adequate separation, then testing and the plan could be halted and no further expense incurred. If on the other hand the pilots reported that this is feasible, then continued testing could be done so that the pilots gain confidence in the system.

#### SATELLITE AND/OR RADIO BEACON FAILURE

In the unlikely event of complete satellite failure, the pilot can notify the tower and the



tower can direct the landing. If a similar GPS monitoring system is installed in the tower as on the aircraft, then the tower would be appraised of the situation at the same instant the pilot was alerted and take appropriate action.

As differential corrections are crucial to the success of this proposal, having two stations within range of the airport is invaluable. Software can detect when one DGPS station fails and can switch to the alternate station, but in this case it takes about 3-8 seconds for this to happen. If on final approach, this cannot be tolerated. A redundant GPS system can be installed that is tuned to the alternate DGPS station. Software would then switch in under a second to the backup station for differential corrections thus assuring the continuing integrity of position determinations.

In the unlikely event that both DGPS stations fail during approach, software would detect this and notify the pilot and tower if a similar GPS system is installed. The tower could then take over the direction of the two flights. If option 2, described below is used, and there is no satellite outage, then both aircraft's positions would be visible to each other and they could maintain adequate separation until the tower took over control.

#### Z ERRORS

An examination of the above table indicates there is a negative bias to the min or max and difference of average to known Z values. It is not known whether this is caused by the GPS receiver or the DGPS signal. At any rate, if this is found to be consistent, this Z bias can be compensated for by the adjustment of the digital Z values in the digital approach.

As noted previously, Z errors can be 2 to 3 times those of X-Y. If the height of the bottom of the clouds are sufficiently high when the pilot breaks through on approach, and the runway is visible, the pilot can make adjustments to the aircraft's glide path to intercept the runway at the desired spot. If on the other hand, there is fog right down to the runway's surface, the pilot can fly above the indicated Z value for a particular X-Y value to make sure he/she does not impact the surface before the runway appears. This means landing some meters further down the runway than anticipated and perhaps missing the first turnout to taxi to the terminal. This is a small price to pay for the ability to land two aircraft simultaneously in the fog on parallel runways.

#### POOR VISIBILITY TESTING

Once pilots have gained confidence in the system during daylight, landings could progress to night time conditions but still with clear skies in order to build more pilot confidence. Finally landings could be made in poor visibility conditions. In this case, FAA regulations would prohibit having passengers on board, so some additional expense would be incurred using empty aircraft for landings for proof of concept. By this time the airport authority and the airlines would see that it is in their own best economic interest to make the expenditures, as much money would be saved by not having disrupted flight schedules.

#### OTHER OPTIONS

Option 1. SFO could implement its own GPS system and achieve errors in the deci- to centimeter range by installing a real time kinematic (RTK) GPS system that utilizes different GPS signals and broadcasts these corrections to RTK receivers in aircraft within the local area. In this case, much more information has to be transmitted within a second or sub second than a low frequency transmitter can handle. Therefore a higher frequency transmitter must be used in the megahertz range. This in turn limits it to line of sight applications which would be suitable for landing aircraft. It is doubtful whether this increased X-Y accuracy would be of benefit to the pilot as it is questionable whether the pilot could consistently land a large aircraft to deci- or centimeter X-Y accuracies? On the other hand, increased Z accuracies may be an over-riding factor. Other possibilities exist to decrease X-Y-Z errors.

Option 2. Another option is to equip both test aircraft with base station GPS systems that would broadcast their coordinate positions. The coordinates could then be picked up by the other aircraft and its position displayed upon the DIM of the other aircraft's computer screen. Rather than confirming that adequate separation is being maintained by looking at a readout/gauge to see the deviation of the aircraft from the digital pathway, each pilot could see the actual position of his/her aircraft and the other aircraft in relation to his/her aircraft on the DIM that is displaying both positions of both aircraft



in real time as the aircraft progress on their approach. After landing and in dense fog conditions, the DIM could be used as a guide to follow the taxiways to the correct terminal gate.

#### SUMMARY

Of the 8 sites surveyed, the computed average of X-Y values did not exceed -1.8 meters from the known position. Of the 100,800 observations made, the largest deviation from a known point or average was 10.063 meters and the largest Z deviation was -21.494 meters (70.48 ft.). It is reasonable to say that errors at any other site in the area would have observations no worse than these. In fact, for an aircraft at altitude or landing in an open environment such as an airport, the X-Y errors would be more likely to be in the range of 3-4 meters and the Z errors 9-10 meters. If one uses the DIM for navigation purposes, the largest error would be 10 meters, with a typical DIM having a horizontal error in the 3-5 meter range. So the worst possible scenario would be 10.31 meters GPS X-Y and 10 meters map error for each aircraft or a total of 41.26 meters (135.37 ft.) for both. Subtract this from the clearance of two Airbuses landing simultaneously directly opposite one another and there would still be a clearance of 352.13 feet between their wingtips. More than the length of a football field!

#### CONCLUSION

Unless this presentation has some flaw, it is felt that this proposal has technical merit and is worthy of investigation and is very cost effective and environmentally benign and that SFO should back the plan and act as facilitator to secure the participation of airlines to make trials.

5/17/99

The author is retired and worked as a Cartographer for the USGS, Nat. Mapping Div. at Menlo Park, Ca. for 33 years and has 20 years experience in digital cartography.



## APPENDIX

## START\_RMSE

Location/Title: Pigeon Pt. South AB5987

Total Positions used in Calculation=450 Date: 25/04/99 LTC: time 11:29:30a

CG Radio Beacon Id = 266 Distance = 0.6 km./0.4 mi.

Name: Pigeon Point, CA

UTM Zone = 10 Sat. used in Position fix = 6 XYZ units = (m)eters/(f)eeet

	X	Y	Z
User Pos.	554129.535 m	4115577.485 m	22.36 m / 73.35 f
Min. Val.	-2.824 m	-5.085 m	-15.558 m / -51.043 f
Max. Val.	1.009 m	1.766 m	-0.058 m / -0.190 f

RMSE	1.606 m	2.145 m	7.859 m
	5.269 f	7.038 f	25.785 f

END\_RMSE

## START\_RMSE

Location/Title: Pigeon Pt. South AB5987

Total Positions used in Calculation=450 Date: 25/04/99 LTC: time 11:40:32a

CG Radio Beacon Id = 0 Distance = 73.8 km./45.9 mi.

Name: Blunt Point, CA

UTM Zone = 10 Sat. used in Position fix = 6 XYZ units = (m)eters/(f)eeet

	X	Y	Z
User Pos.	554129.535 m	4115577.485 m	22.36 m / 73.35 f
Min. Val.	-2.815 m	-5.091 m	-12.658 m / -41.529 f
Max. Val.	2.778 m	4.181 m	3.442 m / 11.293 f

RMSE	1.214 m	2.175 m	7.537 m
	3.984 f	7.135 f	24.726 f

END\_RMSE

## START\_RMSE

Location/Title: Pigeon Pt. South AB5987

Total Positions used in Calculation=450 Date: 25/04/99 LTC: time 11:51:30a

CG Radio Beacon Id = 266 Distance = 0.6 km./0.4 mi.

Name: Pigeon Point, CA

UTM Zone = 10 Sat. used in Position fix = 7 XYZ units = (m)eters/(f)eeet

	X	Y	Z
GPS Avg. Pos.	554130.338 m	4115578.476 m	20.20 m / 66.28 f
Min. Val.	-1.863 m	-3.105 m	-6.103 m / -20.022 f
Max. Val.	1.808 m	2.453 m	5.497 m / 18.036 f

RMSE	0.799 m	1.788 m	2.995 m
	2.621 f	5.866 f	9.825 f

END\_RMSE

## START\_RMSE

Location/Title: Pigeon Pt. South AB5987

Total Positions used in Calculation=450 Date: 25/04/99 LTC: time 12:4:26p

CG Radio Beacon Id = 268 Distance = 73.8 km./45.9 mi.

Name: Blunt Point, CA

UTM Zone = 10 Sat. used in Position fix = 7 XYZ units = (m)eters/(f)eeet

	X	Y	Z
GPS Avg. Pos.	554129.939 m	4115577.561 m	18.74 m / 61.47 f
Min. Val.	-1.904 m	-2.936 m	-5.437 m / -17.837 f
Max. Val.	1.918 m	2.255 m	5.463 m / 17.924 f

RMSE	0.868 m	1.342 m	2.712 m
	2.848 f	4.404 f	8.897 f

END\_RMSE







## START\_RMSE

Location/Title: Pigeon Pt. Ca. AB5987

Total Positions used in Calculation=900 Date: 25/04/99 LTC: time 12:25:33p

CG Radio Beacon Id = 266 Distance = 0.6 km./0.4 mi.

Name: Pigeon Point, CA

UTM Zone = 10 Sat. used in Position fix = 6 XYZ units = (m)eters/(f)eeT

	X	Y	Z
User Pos.	554129.535 m	4115577.485 m	22.36 m / 73.35 f
Min. Val.	-2.695 m	-2.837 m	-10.158 m / -33.327 f
Max. Val.	4.122 m	2.874 m	1.642 m / 5.387 f
RMSE	1.492 m	1.310 m	5.132 m
	4.895 f	4.299 f	16.837 f

END\_RMSE

## START\_RMSE

Location/Title: Pigeon Pt. Ca. AB5987

Total Positions used in Calculation=900 Date: 25/04/99 LTC: time 12:43:45p

CG Radio Beacon Id = 268 Distance = 73.8 km./45.9 mi.

Name: Blunt Point, CA

UTM Zone = 10 Sat. used in Position fix = 8 XYZ units = (m)eters/(f)eeT

	X	Y	Z
User Pos.	554129.535 m	4115577.485 m	22.36 m / 73.35 f
Min. Val.	-2.248 m	-2.833 m	-14.558 m / -47.762 f
Max. Val.	4.563 m	1.946 m	-1.658 m / -5.440 f
RMSE	1.574 m	1.219 m	8.033 m
	5.163 f	3.999 f	26.356 f

END\_RMSE

## START\_RMSE

Location/Title: Pigeon Pt., Ca. AB5987

Total Positions used in Calculation=900 Date: 25/04/99 LTC: time 1:2:29p

CG Radio Beacon Id = 266 Distance = 0.6 km./0.4 mi.

Name: Pigeon Point, CA

UTM Zone = 10 Sat. used in Position fix = 8 XYZ units = (m)eters/(f)eeT

	X	Y	Z
Gps Avg. Pos.	554130.778 m	4115578.536 m	15.70 m / 51.51 f
Min. Val.	-1.718 m	-2.058 m	-4.701 m / -15.424 f
Max. Val.	2.119 m	2.951 m	5.099 m / 16.729 f
RMSE	0.868 m	1.205 m	2.492 m
	2.848 f	3.955 f	8.177 f

END\_RMSE

## START\_RMSE

Location/Title: Pigeon Pt., Ca AB5987

Total Positions used in Calculation=900 Date: 25/04/99 LTC: time 1:21:36p

Radio Beacon Id = 268 Distance = 73.8 km./45.9 mi.

Name: Blunt Point, CA

UTM Zone = 10 Sat. used in Position fix = 8 XYZ units = (m)eters/(f)eeT

	X	Y	Z
GPS Avg. Pos.	554130.681 m	4115577.101 m	15.91 m / 52.19 f
Min. Val.	-1.771 m	-2.284 m	-6.308 m / -20.695 f
Max. Val.	2.067 m	2.536 m	3.192 m / 10.473 f
RMSE	0.704 m	1.263 m	2.706 m
	2.310 f	4.145 f	8.880 f

END\_RMSE



# START\_RMSE

Location/Title: Pigeon Pt., Ca. AB5987

Total Positions used in Calculation=1800 Date: 25/04/99 LTC: time 1:57:15p

CG Radio Beacon Id = 266 Distance = 0.6 km./0.4 mi.

Name: Pigeon Point, CA

UTM Zone = 10 Sat. used in Position fix = 9 XYZ units = (m)eters/(f)eeet

	X	Y	Z
User Pos.	554129.535 m	4115577.485 m	22.36 m / 73.35 f
Min. Val.	-3.139 m	-2.127 m	-13.758 m / -45.138 f
Max. Val.	2.777 m	2.696 m	-1.658 m / -5.440 f

RMSE	1.142 m	0.947 m	6.713 m
	3.745 f	3.107 f	22.025 f

END\_RMSE

# START\_RMSE

Location/Title: Pigeon Pt., Ca. AB5987

Total Positions used in Calculation=1800 Date: 25/04/99 LTC: time 2:31:12p

CG Radio Beacon Id = 268 Distance = 73.8 km./45.9 mi.

Name: Blunt Point, CA

UTM Zone = 10 Sat. used in Position fix = 8 XYZ units = (m)eters/(f)eeet

	X	Y	Z
User Pos.	554129.535 m	4115577.485 m	22.36 m / 73.35 f
Min. Val.	-2.396 m	-1.382 m	-10.258 m / -33.655 f
Max. Val.	2.475 m	1.961 m	-1.258 m / -4.127 f

RMSE	0.946 m	0.751 m	5.659 m
	3.105 f	2.464 f	18.566 f

END\_RMSE

# START\_RMSE

Location/Title: Pigeon Pt., Ca. AB5987

Total Positions used in Calculation=1800 Date: 25/04/99 LTC: time 3:6:3p

CG Radio Beacon Id = 266 Distance = 0.6 km./0.4 mi.

Name: Pigeon Point, CA

UTM Zone = 10 Sat. used in Position fix = 6 XYZ units = (m)eters/(f)eeet

	X	Y	Z
GPS Avg. Pos.	554130.373 m	4115577.086 m	19.75 m / 64.81 f
Min. Val.	-2.506 m	-2.820 m	-6.355 m / -20.849 f
Max. Val.	3.121 m	3.654 m	7.345 m / 24.098 f

RMSE	1.109 m	1.329 m	2.612 m
	3.638 f	4.359 f	8.568 f

END\_RMSE

# START\_RMSE

Location/Title: Pigeon Pt., Ca. AB5987

Total Positions used in Calculation=1800 Date: 25/04/99 LTC: time 3:40:56p

Radio Beacon Id = 268 Distance = 73.8 km./45.9 mi.

Name: Blunt Point, CA

UTM Zone = 10 Sat. used in Position fix = 8 XYZ units = (m)eters/(f)eeet

	X	Y	Z
Gps Avg. Pos.	554129.779 m	4115576.190 m	18.43 m / 60.47 f
Min. Val.	-2.188 m	-3.215 m	-11.831 m / -38.815 f
Max. Val.	1.965 m	2.683 m	10.569 m / 34.676 f

RMSE	0.970 m	1.066 m	4.662 m
	3.182 f	3.497 f	15.296 f

END\_RMSE



## START\_RMSE

Location/Title: Canada College HPGN D CA 04 EH  
 Total Positions used in Calculation=450 Date: 24/04/99 LTC: time 12:45:20p  
 CG Radio Beacon Id = 266 Distance = 30.8 km./19.1 mi.  
 Name: Pigeon Point, CA  
 UTM Zone = 10 Sat. used in Position fix = 8 XYZ units = (m)eters/(f) eet

	X	Y	Z
User Pos.	564736.644 m	4144470.802 m	182.10 m / 597.44 f
Min. Val.	-2.548 m	-2.623 m	-12.100 m / -39.698 f
Max. Val.	2.778 m	0.680 m	-0.900 m / -2.953 f

RMSE	1.209 m	1.166 m	5.685 m
	3.967 f	3.826 f	18.653 f

END\_RMSE

## START\_RMSE

Location/Title: Canada College HPGN D CA 04 EH  
 Total Positions used in Calculation=450 Date: 24/04/99 LTC: time 12:56:50p  
 CG Radio Beacon Id = 268 Distance = 46.8 km./29.1 mi.  
 Name: Blunt Point, CA  
 UTM Zone = 10 Sat. used in Position fix = 8 XYZ units = (m)eters/(f) eet

	X	Y	Z
User Pos.	564736.644 m	4144470.802 m	182.10 m / 597.44 f
Min. Val.	-2.102 m	-2.999 m	-6.800 m / -22.310 f
Max. Val.	1.899 m	1.237 m	-1.300 m / -4.265 f

RMSE	1.017 m	1.335 m	3.816 m
	3.338 f	4.379 f	12.519 f

END\_RMSE

## START\_RMSE

Location/Title: Canada College HPGN D CA 04 EH  
 Total Positions used in Calculation=450 Date: 24/04/99 LTC: time 1:7:28p  
 CG Radio Beacon Id = 266 Distance = 30.8 km./19.1 mi.  
 Name: Pigeon Point, CA  
 UTM Zone = 10 Sat. used in Position fix = 8 XYZ units = (m)eters/(f) eet

	X	Y	Z
GPS Avg. Pos.	564736.119 m	4144469.419 m	178.55 m / 585.79 f
Min. Val.	-1.132 m	-1.630 m	-4.549 m / -14.924 f
Max. Val.	1.380 m	1.707 m	5.151 m / 16.900 f

RMSE	0.650 m	0.770 m	2.404 m
	2.132 f	2.525 f	7.889 f

END\_RMSE

## START\_RMSE

Location/Title: Canada College HPGN D CA 04 EH  
 Total Positions used in Calculation=450 Date: 24/04/99 LTC: time 1:18:17p  
 CG Radio Beacon Id = 268 Distance = 46.8 km./29.1 mi.  
 Name: Blunt Point, CA  
 UTM Zone = 10 Sat. used in Position fix = 8 XYZ units = (m)eters/(f) eet

	X	Y	Z
GPS Avg. Pos.	564736.538 m	4144469.544 m	179.42 m / 588.66 f
Min. Val.	-1.840 m	-1.921 m	-2.523 m / -8.279 f
Max. Val.	1.863 m	1.571 m	2.277 m / 7.469 f

RMSE	0.981 m	0.790 m	1.209 m
	3.218 f	2.591 f	3.967 f

END\_RMSE

## START\_RMSE



Location/Title: Canada College HPGN D CA 04 EH  
 Total Positions used in Calculation=900 Date: 24/04/99 LTC: time 1:38:1p  
 CG Radio Beacon Id = 266 Distance = 30.8 km./19.1 mi.  
 Name: Pigeon Point, CA  
 UTM Zone = 10 Sat. used in Position fix = 8 XYZ units = (m)eters/(f) eet

	X	Y	Z
User Pos.	564736.644 m	4144470.802 m	182.10 m / 597.44 f
Min. Val.	-2.391 m	-2.265 m	-5.600 m / -18.373 f
Max. Val.	0.860 m	1.052 m	0.700 m / 2.297 f

RMSE	0.881 m	0.887 m	2.825 m
	2.891 f	2.911 f	9.267 f

END\_RMSE

START\_RMSE

Location/Title: Canada College HPGN D CA 04 EH  
 Total Positions used in Calculation=900 Date: 24/04/99 LTC: time 1:56:8p  
 CG Radio Beacon Id = 268 Distance = 46.8 km./29.1 mi.  
 Name: Blunt Point, CA  
 UTM Zone = 10 Sat. used in Position fix = 9 XYZ units = (m)eters/(f) eet

	X	Y	Z
User Pos.	564736.644 m	4144470.802 m	182.10 m / 597.44 f
Min. Val.	-0.628 m	-3.192 m	-6.700 m / -21.982 f
Max. Val.	1.740 m	0.887 m	0.900 m / 2.953 f

RMSE	0.864 m	1.227 m	4.083 m
	2.834 f	4.025 f	13.397 f

END\_RMSE

START\_RMSE

Location/Title: Canada College HPGN D CA 04 EH  
 Total Positions used in Calculation=900 Date: 24/04/99 LTC: time 2:14:21p  
 CG Radio Beacon Id = 266 Distance = 30.8 km./19.1 mi.  
 Name: Pigeon Point, CA  
 UTM Zone = 10 Sat. used in Position fix = 9 XYZ units = (m)eters/(f) eet

	X	Y	Z
GPS Avg. Pos.	564737.030 m	4144470.385 m	178.56 m / 585.83 f
Min. Val.	-1.748 m	-1.278 m	-3.162 m / -10.373 f
Max. Val.	2.095 m	1.665 m	3.138 m / 10.297 f

RMSE	0.845 m	0.630 m	1.416 m
	2.771 f	2.066 f	4.645 f

END\_RMSE

START\_RMSE

Location/Title: Canada College HPGN D CA 04 EH  
 Total Positions used in Calculation=900 Date: 24/04/99 LTC: time 2:32:18p  
 CG Radio Beacon Id = 268 Distance = 46.8 km./29.1 mi.  
 Name: Blunt Point, CA  
 UTM Zone = 10 Sat. used in Position fix = 8 XYZ units = (m)eters/(f) eet

	X	Y	Z
GPS Avg. Pos.	564737.062 m	4144470.269 m	178.45 m / 585.48 f
Min. Val.	-1.482 m	-1.000 m	-2.654 m / -8.706 f
Max. Val.	1.907 m	1.604 m	2.646 m / 8.682 f

RMSE	0.754 m	0.550 m	1.343 m
	2.472 f	1.804 f	4.407 f

END\_RMSE

START\_RMSE

Location/Title: Canada College HPGN D CA 04 EH





Total Positions used in Calculation=1800 Date: 24/04/99 LTC: time 3:8:9p  
 CG Radio Beacon Id = 266 Distance = 30.8 km./19.1 mi.  
 Name: Pigeon Point, CA  
 UTM Zone = 10 Sat. used in Position fix = 7 XYZ units = (m)eters/(f)eet

	X	Y	Z
User Pos.	564736.644 m	4144470.802 m	182.10 m / 597.44 f
Min. Val.	-1.206 m	-3.733 m	-7.900 m / -25.919 f
Max. Val.	2.772 m	1.075 m	1.100 m / 3.609 f

RMSE	1.058 m	1.190 m	4.337 m
	3.470 f	3.904 f	14.229 f

END\_RMSE

START\_RMSE

Location/Title: Canada College HPGN D CA 04 EH  
 Total Positions used in Calculation=1800 Date: 24/04/99 LTC: time 3:41:30p  
 CG Radio Beacon Id = 268 Distance = 46.8 km./29.1 mi.  
 Name: Blunt Point, CA  
 UTM Zone = 10 Sat. used in Position fix = 9 XYZ units = (m)eters/(f)eet

	X	Y	Z
User Pos.	564736.644 m	4144470.802 m	182.10 m / 597.44 f
Min. Val.	-1.814 m	-2.253 m	-6.700 m / -21.982 f
Max. Val.	2.778 m	2.902 m	0.300 m / 0.984 f

RMSE	0.826 m	1.052 m	3.673 m
	2.709 f	3.450 f	12.049 f

END\_RMSE

START\_RMSE

Location/Title: Canada College HPGN D CA 04 EH  
 Total Positions used in Calculation=1800 Date: 24/04/99 LTC: time 4:15:54p  
 CG Radio Beacon Id = 266 Distance = 30.8 km./19.1 mi.  
 Name: Pigeon Point, CA  
 UTM Zone = 10 Sat. used in Position fix = 7 XYZ units = (m)eters/(f)eet

	X	Y	Z
GPS Avg. Pos.	564736.908 m	4144471.123 m	179.16 m / 587.80 f
Min. Val.	-1.494 m	-2.028 m	-2.762 m / -9.063 f
Max. Val.	1.917 m	2.407 m	6.738 m / 22.105 f

RMSE	0.724 m	0.778 m	1.926 m
	2.375 f	2.553 f	6.317 f

END\_RMSE

START\_RMSE

Location/Title: Canada College HPGN D CA 04 EH  
 Total Positions used in Calculation=1800 Date: 24/04/99 LTC: time 4:50:25p  
 CG Radio Beacon Id = 268 Distance = 46.8 km./29.1 mi.  
 Name: Blunt Point, CA  
 UTM Zone = 10 Sat. used in Position fix = 7 XYZ units = (m)eters/(f)eet

	X	Y	Z
GPS Avg. Pos.	564736.881 m	4144470.394 m	179.46 m / 588.77 f
Min. Val.	-1.605 m	-1.669 m	-4.957 m / -16.262 f
Max. Val.	2.835 m	2.023 m	4.243 m / 13.922 f

RMSE	0.993 m	0.749 m	1.746 m
	3.256 f	2.456 f	5.729 f

END\_RMSE



## START\_RMSE

Location/Title: West End San Mateo Bridge Guano Island Reset

Total Positions used in Calculation=450 Date: 26/04/99 LTC: time 2:25:6p

CG Radio Beacon Id = 268 Distance = 33.6 km./20.9 mi.

Name: Blunt Point, CA

UTM Zone = 10 Sat. used in Position fix = 8 XYZ units = (m)eters/(f)eeet

	X	Y	Z
User Pos.	565096.809 m	4158680.869 m	4.81 m / 15.78 f
Min. Val.	-2.089 m	-2.495 m	-9.711 m / -31.860 f
Max. Val.	2.184 m	2.120 m	2.489 m / 8.166 f

RMSE	1.305 m	1.325 m	4.950 m
	4.282 f	4.348 f	16.240 f

END\_RMSE

## START\_RMSE

Location/Title: West End San Mateo Bridge Guano Island Reset

Total Positions used in Calculation=450 Date: 26/04/99 LTC: time 2:36:38p

Radio Beacon Id = 266 Distance = 44.5 km./27.7 mi.

Name: Pigeon Point, CA

UTM Zone = 10 Sat. used in Position fix = 8 XYZ units = (m)eters/(f)eeet

	X	Y	Z
User Pos.	565096.809 m	4158680.869 m	4.81 m / 15.78 f
Min. Val.	-1.353 m	-2.299 m	-5.211 m / -17.096 f
Max. Val.	2.923 m	2.512 m	0.089 m / 0.292 f

RMSE	1.640 m	1.165 m	3.295 m
	5.381 f	3.823 f	10.810 f

END\_RMSE

## START\_RMSE

Location/Title: West End San Mateo Bridge Guano Island Reset

Total Positions used in Calculation=450 Date: 26/04/99 LTC: time 2:48:40p

Radio Beacon Id = 268 Distance = 33.6 km./20.9 mi.

Name: Blunt Point, CA

UTM Zone = 10 Sat. used in Position fix = 7 XYZ units = (m)eters/(f)eeet

	X	Y	Z
Avg. GPS Pos.	565097.826 m	4158681.369 m	1.18 m / 3.87 f
Min. Val.	-2.224 m	-1.888 m	-5.179 m / -16.992 f
Max. Val.	2.056 m	2.557 m	3.421 m / 11.223 f

RMSE	1.096 m	1.115 m	2.036 m
	3.596 f	3.657 f	6.679 f

END\_RMSE

## START\_RMSE

Location/Title: West End San Mateo Bridge Guano Island Reset

Total Positions used in Calculation=450 Date: 26/04/99 LTC: time 2:59:59p

Radio Beacon Id = 266 Distance = 44.5 km./27.7 mi.

Name: Pigeon Point, CA

UTM Zone = 10 Sat. used in Position fix = 7 XYZ units = (m)eters/(f)eeet

	X	Y	Z
Avg. GPS Pos.	565097.351 m	4158682.070 m	-3.24 m / -10.62 f
Min. Val.	-0.880 m	-3.136 m	-3.862 m / -12.672 f
Max. Val.	1.343 m	2.040 m	6.138 m / 20.136 f

RMSE	0.424 m	1.232 m	2.372 m
	1.392 f	4.043 f	7.782 f

END\_RMSE

## START\_RMSE



Location/Title: West End San Mateo Bridge Guano Island Reset  
 Total Positions used in Calculation=900 Date: 26/04/99 LTC: time 3:21:40p  
 CG Radio Beacon Id = 268 Distance = 33.6 km./20.9 mi.  
 Name: Blunt Point, CA  
 UTM Zone = 10 Sat. used in Position fix = 7 XYZ units = (m)eters/(f)eet

	X	Y	Z
User Pos.	565096.809 m	4158680.869 m	4.81 m / 15.78 f
Min. Val.	-3.409 m	-4.506 m	-8.610 m / -28.248 f
Max. Val.	5.746 m	2.302 m	10.590 m / 34.744 f

RMSE	2.263 m	1.976 m	4.978 m
	7.426 f	6.484 f	16.333 f

END\_RMSE

START\_RMSE

Location/Title: West End San Mateo Bridge Guano Island Reset  
 Total Positions used in Calculation=900 Date: 26/04/99 LTC: time 3:39:52p  
 CG Radio Beacon Id = 266 Distance = 44.5 km./27.7 mi.  
 Name: Pigeon Point, CA  
 UTM Zone = 10 Sat. used in Position fix = 8 XYZ units = (m)eters/(f)eet

	X	Y	Z
User Pos.	565096.809 m	4158680.869 m	4.81 m / 15.78 f
Min. Val.	-7.881 m	-5.644 m	-13.710 m / -44.980 f
Max. Val.	1.001 m	7.252 m	-1.310 m / -4.298 f

RMSE	4.208 m	3.850 m	6.584 m
	13.806 f	12.630 f	21.601 f

END\_RMSE

START\_RMSE

Location/Title: West End San Mateo Bridge Guano Island Reset  
 Total Positions used in Calculation=900 Date: 26/04/99 LTC: time 3:57:52p  
 CG Radio Beacon Id = 268 Distance = 33.6 km./20.9 mi.  
 Name: Blunt Point, CA  
 UTM Zone = 10 Sat. used in Position fix = 9 XYZ units = (m)eters/(f)eet

	X	Y	Z
Avg. GPS Pos.	565096.523 m	4158680.619 m	1.31 m / 4.31 f
Min. Val.	-2.373 m	-2.816 m	-6.213 m / -20.384 f
Max. Val.	3.355 m	2.923 m	7.087 m / 23.251 f

RMSE	1.344 m	1.452 m	2.799 m
	4.410 f	4.764 f	9.184 f

END\_RMSE

START\_RMSE

Location/Title: West End San Mateo Bridge Guano Island Reset  
 Total Positions used in Calculation=900 Date: 26/04/99 LTC: time 4:17:18p  
 Radio Beacon Id = 266 Distance = 44.5 km./27.7 mi.  
 Name: Pigeon Point, CA  
 UTM Zone = 10 Sat. used in Position fix = 7 XYZ units = (m)eters/(f)eet

	X	Y	Z
Avg. GPS Pos.	565096.118 m	4158681.056 m	-1.22 m / -4.01 f
Min. Val.	-3.461 m	-1.395 m	-5.177 m / -16.986 f
Max. Val.	2.433 m	3.028 m	6.923 m / 22.712 f

RMSE	1.389 m	0.817 m	2.865 m
	4.558 f	2.680 f	9.398 f

END\_RMSE

START\_RMSE

Location/Title: West End San Mateo Bridge Guano Island Reset



Total Positions used in Calculation=1800 Date: 26/04/99 LTC: time 4:52:46p  
 Radio Beacon Id = 268 Distance = 33.6 km./20.9 mi.  
 Name: Blunt Point, CA  
 UTM Zone = 10 Sat. used in Position fix = 7 XYZ units = (m)eters/(f)eet

	X	Y	Z
User Pos.	565096.809 m	4158680.869 m	4.81 m / 15.78 f
Min. Val.	-3.240 m	-5.471 m	-11.610 m / -38.091 f
Max. Val.	4.344 m	6.230 m	5.290 m / 17.356 f

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RMSE	1.661 m	2.615 m	5.379 m
	5.451 f	8.580 f	17.648 f

END\_RMSE

START\_RMSE

Location/Title: West End San Mateo Bridge Guano Island Reset

Total Positions used in Calculation=1800 Date: 27/04/99 LTC: time 5:26:34a

Radio Beacon Id = 266 Distance = 44.5 km./27.7 mi.

Name: Pigeon Point, CA

UTM Zone = 10 Sat. used in Position fix = 7 XYZ units = (m)eters/(f)eet

	X	Y	Z
User Pos.	565096.809 m	4158680.869 m	4.81 m / 15.78 f
Min. Val.	-2.313 m	-3.214 m	-18.110 m / -59.416 f
Max. Val.	2.939 m	10.063 m	7.990 m / 26.214 f

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RMSE	1.332 m	3.165 m	7.969 m
	4.371 f	10.383 f	26.143 f

END\_RMSE

START\_RMSE

Location/Title: West End San Mateo Bridge Guano Island Reset

Total Positions used in Calculation=1800 Date: 27/04/99 LTC: time 6:0:20a

CG Radio Beacon Id = 268 Distance = 33.6 km./20.9 mi.

Name: Blunt Point, CA

UTM Zone = 10 Sat. used in Position fix = 7 XYZ units = (m)eters/(f)eet

	X	Y	Z
Avg. GPS Pos.	565096.950 m	4158680.518 m	-2.28 m / -7.47 f
Min. Val.	-2.817 m	-3.625 m	-6.824 m / -22.388 f
Max. Val.	2.770 m	3.218 m	6.576 m / 21.575 f

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RMSE	1.133 m	1.487 m	2.829 m
	3.716 f	4.880 f	9.280 f

END\_RMSE

START\_RMSE

Location/Title: West End San Mateo Bridge Guano Island Reset

Total Positions used in Calculation=1800 Date: 27/04/99 LTC: time 6:34:5a

CG Radio Beacon Id = 266 Distance = 44.5 km./27.7 mi.

Name: Pigeon Point, CA

UTM Zone = 10 Sat. used in Position fix = 8 XYZ units = (m)eters/(f)eet

	X	Y	Z
Avg. GPS Pos.	565096.461 m	4158680.361 m	-0.82 m / -2.70 f
Min. Val.	-3.666 m	-1.985 m	-4.376 m / -14.355 f
Max. Val.	2.549 m	2.427 m	5.124 m / 16.812 f

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RMSE	1.070 m	1.017 m	2.330 m
	3.512 f	3.336 f	7.646 f

END\_RMSE





## START\_RMSE

Location/Title: Candlestick Park - HPGN D CA 04 GF AB 7679

Total Positions used in Calculation=450 Date: 08/05/99 LTC: time 12:14:58p

Blunt Point, CA CG Radio Beacon Id = 268 Dist. = 16.1 km./10.0 mi.

UTM Zone = 10 Sat. used in Position fix = 8 XYZ units = (m)eters/(f) eet

	X	Y	Z
User Pos.	553454.019 m	4173385.413 m	5.40 m / 17.72 f
Min. Val.	-1.144 m	-1.307 m	-7.500 m / -24.606 f
Max. Val.	1.210 m	0.915 m	-2.200 m / -7.218 f
RMSE	0.637 m	0.646 m	4.988 m
	2.090 f	2.120 f	16.365 f

## END\_RMSE

## START\_RMSE

Location/Title: Candlestick Park - HPGN D CA 04 GF AB 7679

Total Positions used in Calculation=450 Date: 08/05/99 LTC: time 12:25:37p

Pigeon Point, CA CG Radio Beacon Id = 267 Dist. = 58.0 km./36.0 mi.

UTM Zone = 10 Sat. used in Position fix = 8 XYZ units = (m)eters/(f) eet

	X	Y	Z
User Pos.	553454.019 m	4173385.413 m	5.40 m / 17.72 f
Min. Val.	-2.166 m	-0.763 m	-9.500 m / -31.168 f
Max. Val.	1.210 m	1.268 m	-1.800 m / -5.906 f
RMSE	1.304 m	0.508 m	6.465 m
	4.277 f	1.667 f	21.209 f

## END\_RMSE

## START\_RMSE

Location/Title: Candlestick Park - HPGN D CA 04 GF AB 7679

Total Positions used in Calculation=450 Date: 08/05/99 LTC: time 12:35:47p

Blunt Point, CA CG Radio Beacon Id = 268 Dist. = 16.1 km./10.0 mi.

UTM Zone = 10 Sat. used in Position fix = 8 XYZ units = (m)eters/(f) eet

	X	Y	Z
Avg. GPS Pos.	553453.367 m	4173386.866 m	0.42 m / 1.39 f
Min. Val.	-0.642 m	-1.843 m	-3.722 m / -12.213 f
Max. Val.	0.837 m	1.672 m	2.678 m / 8.785 f
RMSE	0.372 m	0.802 m	1.644 m
	1.220 f	2.631 f	5.395 f

## END\_RMSE

## START\_RMSE

Location/Title: Candlestick Park - HPGN D CA 04 GF AB7679

Total Positions used in Calculation=450 Date: 08/05/99 LTC: time 12:45:43p

Pigeon Point, CA CG Radio Beacon Id = 267 Dist. = 58.0 km./36.0 mi.

UTM Zone = 10 Sat. used in Position fix = 8 XYZ units = (m)eters/(f) eet

	X	Y	Z
Avg. GPS Pos.	553453.108 m	4173386.768 m	0.74 m / 2.44 f
Min. Val.	-1.270 m	-1.005 m	-3.045 m / -9.989 f
Max. Val.	1.237 m	0.842 m	1.655 m / 5.431 f
RMSE	0.843 m	0.492 m	1.047 m
	2.764 f	1.615 f	3.435 f

## END\_RMSE

## START\_RMSE

Location/Title: Candlestick Park - HPGN D CA 04 GF AB7679

Total Positions used in Calculation=900 Date: 08/05/99 LTC: time 1:4:19p

Blunt Point, CA CG Radio Beacon Id = 268 Dist. = 16.1 km./10.0 mi.



UTM Zone = 10 Sat. used in Position fix = 9 XYZ units = (m)eters/(f)eeet

	X	Y	Z
User Pos.	553454.019 m	4173385.413 m	5.40 m / 17.72 f
Min. Val.	-1.742 m	-0.940 m	-8.400 m / -27.559 f
Max. Val.	0.180 m	2.379 m	-1.500 m / -4.921 f

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RMSE	0.937 m	0.997 m	5.218 m
	3.073 f	3.271 f	17.120 f

END\_RMSE

START\_RMSE

Location/Title: Candlestick Park - HPGN D CA 04 GF AB7679

Total Positions used in Calculation=900 Date: 08/05/99 LTC: time 1:21:54p

Pigeon Point, CA CG Radio Beacon Id = 267 Dist. = 58.0 km./36.0 mi.

UTM Zone = 10 Sat. used in Position fix = 9 XYZ units = (m)eters/(f)eeet

	X	Y	Z
User Pos.	553454.019 m	4173385.413 m	5.40 m / 17.72 f
Min. Val.	-2.472 m	-0.947 m	-9.500 m / -31.168 f
Max. Val.	0.325 m	3.681 m	-3.100 m / -10.171 f

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RMSE	1.242 m	1.804 m	5.531 m
	4.074 f	5.920 f	18.146 f

END\_RMSE

START\_RMSE

Location/Title: Candlestick Park - HPGN D CA 04 GF AB7679

Total Positions used in Calculation=900 Date: 08/05/99 LTC: time 1:39:5p

Blunt Point, CA CG Radio Beacon Id = 268 Dist. = 16.1 km./10.0 mi.

UTM Zone = 10 Sat. used in Position fix = 8 XYZ units = (m)eters/(f)eeet

	X	Y	Z
Avg. GPS Pos.	553453.419 m	4173386.920 m	1.25 m / 4.11 f
Min. Val.	-1.285 m	-1.148 m	-3.853 m / -12.640 f
Max. Val.	1.369 m	1.071 m	2.847 m / 9.341 f

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RMSE	0.713 m	0.544 m	1.722 m
	2.339 f	1.784 f	5.651 f

END\_RMSE

START\_RMSE

Location/Title: Candlestick Park - HPGN D CA 04 GF AB7679

Total Positions used in Calculation=900 Date: 08/05/99 LTC: time 1:56:3p

Pigeon Point, CA CG Radio Beacon Id = 267 Dist. = 58.0 km./36.0 mi.

UTM Zone = 10 Sat. used in Position fix = 7 XYZ units = (m)eters/(f)eeet

	X	Y	Z
Avg. GPS Pos.	553453.173 m	4173386.840 m	1.76 m / 5.77 f
Min. Val.	-1.771 m	-1.998 m	-2.559 m / -8.396 f
Max. Val.	1.032 m	1.883 m	4.241 m / 13.914 f

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RMSE	0.727 m	0.956 m	1.672 m
	2.384 f	3.136 f	5.486 f

END\_RMSE

START\_RMSE

Location/Title: Candlestick Park - HPGN D CA 04 GF AB7679

Total Positions used in Calculation=1800 Date: 08/05/99 LTC: time 2:30:52p

Blunt Point, CA CG Radio Beacon Id = 268 Dist. = 16.1 km./10.0 mi.

UTM Zone = 10 Sat. used in Position fix = 7 XYZ units = (m)eters/(f)eeet

	X	Y	Z
User Pos.	553454.019 m	4173385.413 m	5.40 m / 17.72 f
Min. Val.	-4.676 m	-2.231 m	-10.400 m / -34.121 f



Max. Val.	2.383 m	2.388 m	-2.400 m / -7.874 f
RMSE	1.244 m	1.018 m	6.437 m
	4.083 f	3.339 f	21.118 f

END\_RMSE

START\_RMSE

Location/Title: Candlestick Park - HPGN D CA 04GF AB7679

Total Positions used in Calculation=1800 Date: 08/05/99 LTC: time 3:3:42p

Pigeon Point, CA CG Radio Beacon Id = 267 Dist. = 58.0 km./36.0 mi.

UTM Zone = 10 Sat. used in Position fix = 9 XYZ units = (m)eters/(f)eet

	X	Y	Z
User Pos.	553454.019 m	4173385.413 m	5.40 m / 17.72 f
Min. Val.	-4.232 m	-2.058 m	-9.900 m / -32.480 f
Max. Val.	2.683 m	3.302 m	2.800 m / 9.186 f

RMSE	1.792 m	1.255 m	4.825 m
	5.879 f	4.117 f	15.831 f

END\_RMSE

START\_RMSE

Location/Title: Candlestick Park - HPGN D CA 04 GF AB7679

Total Positions used in Calculation=1800 Date: 08/05/99 LTC: time 3:36:37p

Blunt Point, CA CG Radio Beacon Id = 268 Dist. = 16.1 km./10.0 mi.

UTM Zone = 10 Sat. used in Position fix = 7 XYZ units = (m)eters/(f)eet

	X	Y	Z
Avg. GPS Pos.	553453.928 m	4173385.919 m	0.48 m / 1.57 f
Min. Val.	-4.002 m	-1.625 m	-4.178 m / -13.706 f
Max. Val.	3.054 m	2.783 m	4.322 m / 14.181 f

RMSE	1.370 m	1.011 m	1.898 m
	4.495 f	3.318 f	6.228 f

END\_RMSE

START\_RMSE

Location/Title: Candlestick Park - HPGN D CA 04 GF AB7679

Total Positions used in Calculation=1800 Date: 08/05/99 LTC: time 4:9:26p

Pigeon Point, CA CG Radio Beacon Id = 267 Dist. = 58.0 km./36.0 mi.

UTM Zone = 10 Sat. used in Position fix = 7 XYZ units = (m)eters/(f)eet

	X	Y	Z
Avg. GPS Pos.	553454.735 m	4173385.711 m	1.03 m / 3.37 f
Min. Val.	-1.852 m	-2.721 m	-3.928 m / -12.888 f
Max. Val.	2.982 m	1.930 m	3.672 m / 12.047 f

RMSE	0.857 m	0.943 m	1.741 m
	2.812 f	3.094 f	5.711 f

END\_RMSE



# START\_RMSE

Location/Title: Skyline Blvd at Hayne Rd. HPGN D CA 04 EG

Total Positions used in Calculation=450 Date: 28/04/99 LTC: time 1:46:40p

CG Radio Beacon Id = 268 Distance = 33.9 km./21.1 mi.

Name: Blunt Point, CA

UTM Zone = 10 Sat. used in Position fix = 9 XYZ units = (m)eters/(f)eet

	X	Y	Z
User Pos.	555389.970 m	4155630.880 m	195.08 m / 640.03 f
Min. Val.	-1.228 m	-0.713 m	-6.580 m / -21.588 f
Max. Val.	2.019 m	2.436 m	-1.880 m / -6.168 f

RMSE	0.807 m	1.470 m	4.989 m
	2.647 f	4.824 f	16.367 f

END\_RMSE

# START\_RMSE

Location/Title: SkylineBlvd at Hayne rd. HPGN D CA 04 EG

Total Positions used in Calculation=450 Date: 28/04/99 LTC: time 1:58:16p

CG Radio Beacon Id = 266 Distance = 40.3 km./25.0 mi.

Name: Pigeon Point, CA

UTM Zone = 10 Sat. used in Position fix = 9 XYZ units = (m)eters/(f)eet

	X	Y	Z
User Pos.	555389.970 m	4155630.880 m	195.08 m / 640.03 f
Min. Val.	-0.937 m	0.027 m	-11.680 m / -38.320 f
Max. Val.	1.131 m	2.250 m	-0.880 m / -2.887 f

RMSE	0.504 m	1.377 m	5.949 m
	1.653 f	4.517 f	19.519 f

END\_RMSE

# START\_RMSE

Location/Title: Skyline Blvd at Hayne Rd. HPGN D CA 04 EG

Total Positions used in Calculation=450 Date: 28/04/99 LTC: time 2:9:41p

CG Radio Beacon Id = 268 Distance = 33.9 km./21.1 mi.

Name: Blunt Point, CA

UTM Zone = 10 Sat. used in Position fix = 8 XYZ units = (m)eters/(f)eet

	X	Y	Z
GPS Avg. Pos.	555389.453 m	4155632.026 m	188.86 m / 619.60 f
Min. Val.	-1.750 m	-1.680 m	-5.056 m / -16.586 f
Max. Val.	1.644 m	1.827 m	4.344 m / 14.253 f

RMSE	0.860 m	0.837 m	2.759 m
	2.820 f	2.745 f	9.050 f

END\_RMSE

# START\_RMSE

Location/Title: SKYline Blvd at Hayne Rd. HPGN D CA 04 EG

Total Positions used in Calculation=450 Date: 28/04/99 LTC: time 2:22:51p

CG Radio Beacon Id = 266 Distance = 40.3 km./25.0 mi.

Name: Pigeon Point, CA

UTM Zone = 10 Sat. used in Position fix = 8 XYZ units = (m)eters/(f)eet

	X	Y	Z
GPS Avg. Pos.	555391.548 m	4155631.501 m	187.42 m / 614.89 f
Min. Val.	-1.912 m	-1.505 m	-3.020 m / -9.907 f
Max. Val.	1.625 m	1.822 m	2.380 m / 7.810 f

RMSE	0.639 m	0.852 m	1.045 m
	2.095 f	2.795 f	3.428 f

END\_RMSE

# START\_RMSE





Location/Title: Skyline Blvd at Hayne Rd HPGN D CA 04 EG  
 Total Positions used in Calculation=900 Date: 28/04/99 LTC: time 2:43:36p  
 CG Radio Beacon Id = 268 Distance = 33.9 km./21.1 mi.  
 Name: Blunt Point, CA  
 UTM Zone = 10 Sat. used in Position fix = 7 XYZ units = (m)eters/(f)eet

	X	Y	Z
User Pos.	555389.970 m	4155630.880 m	195.08 m / 640.03 f
Min. Val.	-0.923 m	-1.263 m	-10.680 m / -35.039 f
Max. Val.	2.895 m	2.438 m	-2.380 m / -7.808 f

RMSE	1.107 m	1.106 m	6.328 m
	3.631 f	3.630 f	20.760 f

END\_RMSE

START\_RMSE

Location/Title: Skyline Blvd. at Hayne Rd. HPGN D CA 04 EG  
 Total Positions used in Calculation=900 Date: 28/04/99 LTC: time 3:1:33p  
 CG Radio Beacon Id = 266 Distance = 40.3 km./25.0 mi.  
 Name: Pigeon Point, CA  
 UTM Zone = 10 Sat. used in Position fix = 7 XYZ units = (m)eters/(f)eet

	X	Y	Z
User Pos.	555389.970 m	4155630.880 m	195.08 m / 640.03 f
Min. Val.	-1.956 m	-1.273 m	-11.780 m / -38.648 f
Max. Val.	2.599 m	2.817 m	-2.280 m / -7.480 f

RMSE	1.149 m	0.789 m	7.230 m
	3.771 f	2.588 f	23.721 f

END\_RMSE

START\_RMSE

Location/Title: Skyline Blvd at5 Hayne Rd. HPGN D CA 04 EG  
 Total Positions used in Calculation=900 Date: 28/04/99 LTC: time 3:22:16p  
 CG Radio Beacon Id = 268 Distance = 33.9 km./21.1 mi.  
 Name: Blunt Point, CA  
 UTM Zone = 10 Sat. used in Position fix = 9 XYZ units = (m)eters/(f)eet

	X	Y	Z
GPS Avg. Pos.	555390.067 m	4155630.689 m	189.76 m / 622.58 f
Min. Val.	-2.057 m	-1.254 m	-5.163 m / -16.938 f
Max. Val.	1.781 m	2.247 m	3.137 m / 10.293 f

RMSE	0.886 m	0.824 m	1.816 m
	2.908 f	2.703 f	5.957 f

END\_RMSE

START\_RMSE

Location/Title: Skyline Blvd at Hayne Blvd HPGN D CA 04 EG  
 Total Positions used in Calculation=900 Date: 28/04/99 LTC: time 3:41:2p  
 CG Radio Beacon Id = 266 Distance = 40.3 km./25.0 mi.  
 Name: Pigeon Point, CA  
 UTM Zone = 10 Sat. used in Position fix = 9 XYZ units = (m)eters/(f)eet

	X	Y	Z
GPS Avg. Pos.	555389.875 m	4155631.987 m	191.04 m / 626.76 f
Min. Val.	-2.165 m	-1.270 m	-3.436 m / -11.274 f
Max. Val.	1.672 m	0.778 m	1.964 m / 6.443 f

RMSE	0.814 m	0.400 m	1.134 m
	2.670 f	1.311 f	3.719 f

END\_RMSE

START\_RMSE

Location/Title: SkyLine Blvd at Hayne Rd, HPGN D CA 04 EG



Total Positions used in Calculation=1800 Date: 28/04/99 LTC: time 4:17:2p  
 CG Radio Beacon Id = 268 Distance = 33.9 km./21.1 mi.  
 Name: Blunt Point, CA  
 UTM Zone = 10 Sat. used in Position fix = 7 XYZ units = (m)eters/(f)eet

	X	Y	Z
User Pos.	555389.970 m	4155630.880 m	195.08 m / 640.03 f
Min. Val.	-3.730 m	-1.271 m	-10.780 m / -35.367 f
Max. Val.	1.583 m	3.353 m	-1.280 m / -4.199 f

RMSE	0.966 m	1.203 m	5.999 m
	3.171 f	3.946 f	19.682 f

END\_RMSE

START\_RMSE

Location/Title: Skyline Blvd at Hayne Rd, HPGN D CA 04 EG  
 Total Positions used in Calculation=1800 Date: 28/04/99 LTC: time 4:50:56p  
 CG Radio Beacon Id = 266 Distance = 40.3 km./25.0 mi.  
 Name: Pigeon Point, CA  
 UTM Zone = 10 Sat. used in Position fix = 7 XYZ units = (m)eters/(f)eet

	X	Y	Z
User Pos.	555389.970 m	4155630.880 m	195.08 m / 640.03 f
Min. Val.	-2.977 m	-1.468 m	-10.680 m / -35.039 f
Max. Val.	3.940 m	4.853 m	-0.880 m / -2.887 f

RMSE	1.564 m	1.618 m	6.718 m
	5.132 f	5.307 f	22.041 f

END\_RMSE

START\_RMSE

Location/Title: Skyline Blvd at Hayne Rd. HPGN D CA 04 EG  
 Total Positions used in Calculation=1800 Date: 03/05/99 LTC: time 12:42:26p  
 Blunt Point, CA CG Radio Beacon Id = 268 Dist. = 33.9 km./21.1 mi.  
 UTM Zone = 10 Sat. used in Position fix = 8 XYZ units = (m)eters/(f)eet

	X	Y	Z
Avg. GPS Pos.	555389.753 m	4155631.031 m	188.57 m / 618.68 f
Min. Val.	-2.484 m	-2.522 m	-4.572 m / -15.001 f
Max. Val.	2.244 m	3.007 m	5.628 m / 18.463 f

RMSE	1.123 m	1.085 m	1.769 m
	3.685 f	3.561 f	5.803 f

END\_RMSE

START\_RMSE

Location/Title: Skyline Blvd. at Hayne Rd. HPGN D CA 04 EG  
 Total Positions used in Calculation=1800 Date: 03/05/99 LTC: time 1:16:34p  
 Pigeon Point, CA CG Radio Beacon Id = 266 Dist. = 40.3 km./25.0 mi.  
 UTM Zone = 10 Sat. used in Position fix = 9 XYZ units = (m)eters/(f)eet

	X	Y	Z
Avg. GPS Pos.	555389.518 m	4155631.604 m	189.90 m / 623.04 f
Min. Val.	-2.403 m	-1.990 m	-4.604 m / -15.105 f
Max. Val.	2.466 m	1.880 m	3.896 m / 12.782 f

RMSE	0.995 m	0.825 m	1.994 m
	3.263 f	2.707 f	6.543 f

END\_RMSE



## START\_RMSE

Location/Title: San Carlos Airport - Carlport AZ MK Ht 3692  
 Total Positions used in Calculation=450 Date: 04/05/99 LTC: time 12:49:44p  
 Pigeon Point, CA CG Radio Beacon Id = 266 Dist. = 38.6 km./24.0 mi.  
 UTM Zone = 10 Sat. used in Position fix = 8 XYZ units = (m)eters/(f)eet

	X	Y	Z
User Pos.	565955.747 m	4152273.901 m	3.20 m / 10.51 f
Min. Val.	-0.203 m	-1.268 m	-8.202 m / -26.909 f
Max. Val.	1.866 m	1.517 m	-2.502 m / -8.209 f

RMSE	1.165 m	0.708 m	5.208 m
	3.823 f	2.322 f	17.087 f

## END\_RMSE

## START\_RMSE

Location/Title: San Carlos Airport - Carlport AZ MK HT 3692  
 Total Positions used in Calculation=450 Date: 04/05/99 LTC: time 1:0:53p  
 Blunt Point, CA CG Radio Beacon Id = 268 Dist. = 39.8 km./24.8 mi.  
 UTM Zone = 10 Sat. used in Position fix = 8 XYZ units = (m)eters/(f)eet

	X	Y	Z
User Pos.	565955.747 m	4152273.901 m	3.20 m / 10.51 f
Min. Val.	-0.929 m	-1.447 m	-7.502 m / -24.613 f
Max. Val.	1.567 m	1.329 m	-1.002 m / -3.287 f

RMSE	0.852 m	0.820 m	4.749 m
	2.795 f	2.689 f	15.580 f

## END\_RMSE

## START\_RMSE

Location/Title: San Carlos Airport - Carlport Az Mk Ht3692  
 Total Positions used in Calculation=450 Date: 04/05/99 LTC: time 1:10:51p  
 Pigeon Point, CA CG Radio Beacon Id = 266 Dist. = 38.6 km./24.0 mi.  
 UTM Zone = 10 Sat. used in Position fix = 9 XYZ units = (m)eters/(f)eet

	X	Y	Z
Avg. GPS Pos.	565956.421 m	4152273.843 m	-0.17 m / -0.56 f
Min. Val.	-1.462 m	-1.201 m	-2.629 m / -8.624 f
Max. Val.	1.476 m	1.207 m	3.071 m / 10.077 f

RMSE	0.708 m	0.574 m	1.486 m
	2.323 f	1.882 f	4.875 f

## END\_RMSE

## START\_RMSE

Location/Title: San Carlos Airport - Carport AZ`MK HT 3692  
 Total Positions used in Calculation=450 Date: 04/05/99 LTC: time 1:20:26p  
 Blunt Point, CA CG Radio Beacon Id = 268 Dist. = 39.8 km./24.8 mi.  
 UTM Zone = 10 Sat. used in Position fix = 8 XYZ units = (m)eters/(f)eet

	X	Y	Z
Avg. GPS Pos.	565955.913 m	4152273.372 m	0.57 m / 1.87 f
Min. Val.	-0.947 m	-0.927 m	-2.669 m / -8.755 f
Max. Val.	0.956 m	0.935 m	2.731 m / 8.961 f

RMSE	0.401 m	0.427 m	1.433 m
	1.315 f	1.401 f	4.703 f

## END\_RMSE

## START\_RMSE

Location/Title: San Carlos Airport - Carlport AZ MK HT 3692  
 Total Positions used in Calculation=900 Date: 04/05/99 LTC: time 1:39:29p  
 Pigeon Point, CA CG Radio Beacon Id = 266 Dist. = 38.6 km./24.0 mi.  
 UTM Zone = 10 Sat. used in Position fix = 9 XYZ units = (m)eters/(f)eet

	X	Y	Z
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User Pos.	565955.747 m	4152273.901 m	3.20 m /	10.51 f
Min. Val.	-1.102 m	-0.709 m	-8.502 m /	-27.894 f
Max. Val.	2.744 m	2.998 m	0.898 m /	2.946 f

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RMSE	1.017 m	1.050 m	3.905 m
	3.336 f	3.445 f	12.812 f

END\_RMSE

START\_RMSE

Location/Title: San Carlos Airport - Carlport AZ MK HT 3692

Total Positions used in Calculation=900 Date: 04/05/99 LTC: time 1:56:55p

Blunt Point, CA CG Radio Beacon Id = 268 Dist. = 39.8 km./24.8 mi.

UTM Zone = 10 Sat. used in Position fix = 8 XYZ units = (m)eters/(f) eet

	X	Y	Z
User Pos.	565955.747 m	4152273.901 m	3.20 m / 10.51 f
Min. Val.	-0.356 m	-1.077 m	-7.402 m / -24.285 f
Max. Val.	2.598 m	2.067 m	-1.902 m / -6.240 f

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RMSE	1.077 m	0.720 m	5.304 m
	3.535 f	2.361 f	17.401 f

END\_RMSE

START\_RMSE

Location/Title: San Carlos Airport - Carlport AZ MK HT 3692

Total Positions used in Calculation=900 Date: 04/05/99 LTC: time 4:51:59p

Pigeon Point, CA CG Radio Beacon Id = 266 Dist. = 38.6 km./24.0 mi.

UTM Zone = 10 Sat. used in Position fix = 6 XYZ units = (m)eters/(f) eet

	X	Y	Z
Avg. GPS Pos.	565956.032 m	4152274.557 m	-3.29 m / -10.80 f
Min. Val.	-2.556 m	-1.740 m	-7.807 m / -25.614 f
Max. Val.	1.284 m	2.704 m	5.593 m / 18.350 f

---

RMSE	0.803 m	1.097 m	3.599 m
	2.633 f	3.600 f	11.809 f

END\_RMSE

START\_RMSE

Location/Title: San Carlos Airport - Carlport AZ MK HT 3692

Total Positions used in Calculation=900 Date: 04/05/99 LTC: time 2:13:57p

Blunt Point, CA CG Radio Beacon Id = 268 Dist. = 39.8 km./24.8 mi.

UTM Zone = 10 Sat. used in Position fix = 7 XYZ units = (m)eters/(f) eet

	X	Y	Z
Avg. GPS Pos.	565956.050 m	4152274.952 m	-2.38 m / -7.82 f
Min. Val.	-1.690 m	-1.755 m	-4.216 m / -13.833 f
Max. Val.	1.837 m	1.765 m	2.584 m / 8.476 f

---

RMSE	0.756 m	0.822 m	1.751 m
	2.480 f	2.695 f	5.744 f

END\_RMSE

START\_RMSE

Location/Title: San Carlos Airport - Carlport AZ MK MT 3692

Total Positions used in Calculation=1800 Date: 04/05/99 LTC: time 2:49:56p

Pigeon Point, CA CG Radio Beacon Id = 266 Dist. = 38.6 km./24.0 mi.

UTM Zone = 10 Sat. used in Position fix = 8 XYZ units = (m)eters/(f) eet

	X	Y	Z
User Pos.	565955.747 m	4152273.901 m	3.20 m / 10.51 f
Min. Val.	-1.813 m	-1.826 m	-9.102 m / -29.862 f
Max. Val.	2.015 m	2.061 m	-2.102 m / -6.896 f

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RMSE	0.749 m	0.739 m	5.875 m
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END\_RMSE                      2.458 f                      2.425 f                      19.274 f

START\_RMSE  
Location/Title: San Carlos Airport - Carlport AZ MK HT3692  
Total Positions used in Calculation=1800    Date: 04/05/99    LTC: time 3:24:10p  
Blunt Point, CA    CG Radio Beacon Id = 268    Dist. = 39.8 km./24.8 mi.  
UTM Zone = 10    Sat. used in Position fix = 8    XYZ units = (m)eters/(f)eet

	X	Y	Z
User Pos.	565955.747 m	4152273.901 m	3.20 m / 10.51 f
Min. Val.	-1.527 m	-2.372 m	-8.502 m / -27.894 f
Max. Val.	3.479 m	2.428 m	-0.002 m / -0.007 f

RMSE	0.802 m	0.962 m	4.296 m
	2.631 f	3.155 f	14.095 f

END\_RMSE

START\_RMSE  
Location/Title: San Carlos Airport - Carlport AZ MK HT 3692  
Total Positions used in Calculation=1800    Date: 04/05/99    LTC: time 3:57:51p  
Pigeon Point, CA    CG Radio Beacon Id = 266    Dist. = 38.6 km./24.0 mi.  
UTM Zone = 10    Sat. used in Position fix = 7    XYZ units = (m)eters/(f)eet

	X	Y	Z
Avg. GPS Pos.	565955.430 m	4152273.377 m	-2.24 m / -7.34 f
Min. Val.	-1.905 m	-1.843 m	-6.362 m / -20.874 f
Max. Val.	1.619 m	2.785 m	8.538 m / 28.011 f

RMSE	0.796 m	0.913 m	3.001 m
	2.613 f	2.996 f	9.845 f

END\_RMSE

START\_RMSE  
Location/Title: San Carlos Airport - Carlport AZ MK HT 3692  
Total Positions used in Calculation=1800    Date: 04/05/99    LTC: time 4:30:49p  
Blunt Point, CA    CG Radio Beacon Id = 268    Dist. = 39.8 km./24.8 mi.  
UTM Zone = 10    Sat. used in Position fix = 7    XYZ units = (m)eters/(f)eet

	X	Y	Z
Avg. GPS Pos.	565955.800 m	4152274.086 m	-2.81 m / -9.23 f
Min. Val.	-2.000 m	-3.869 m	-8.487 m / -27.844 f
Max. Val.	1.930 m	4.107 m	6.313 m / 20.712 f

RMSE	0.735 m	1.621 m	2.850 m
	2.412 f	5.318 f	9.351 f

END\_RMSE



## START\_RMSE

Location/Title: Palo Alto RR Station - Palo Alto SE BASE RESET

Total Positions used in Calculation=450 Date: 01/05/99 LTC: time 3:57:8p

Pigeon Point, CA CG Radio Beacon Id = 266 Dist. = 34.8 km./21.6 mi.

UTM Zone = 10 Sat. used in Position fix = 7 XYZ units = (m)eters/(f) eet

	X	Y	Z
User Pos.	573718.648 m	4144495.195 m	22.54 m / 73.95 f
Min. Val.	-4.690 m	-2.010 m	-13.640 m / -44.751 f
Max. Val.	1.376 m	4.101 m	2.260 m / 7.415 f

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RMSE	2.220 m	1.615 m	5.602 m
	7.283 f	5.298 f	18.379 f

## END\_RMSE

## START\_RMSE

Location/Title: PaloAlto RR Station - Palo Alto SE Base Reset

Total Positions used in Calculation=450 Date: 01/05/99 LTC: time 4:6:41p

Blunt Point, CA CG Radio Beacon Id = 268 Dist. = 50.1 km./31.1 mi.

UTM Zone = 10 Sat. used in Position fix = 7 XYZ units = (m)eters/(f) eet

	X	Y	Z
User Pos.	573718.648 m	4144495.195 m	22.54 m / 73.95 f
Min. Val.	-2.873 m	-2.384 m	-10.740 m / -35.236 f
Max. Val.	1.692 m	0.957 m	0.960 m / 3.150 f

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RMSE	1.268 m	1.082 m	6.190 m
	4.160 f	3.549 f	20.310 f

## END\_RMSE

## START\_RMSE

Location/Title: Palo Alto RR Station - Palo Alto SE Base Reset

Total Positions used in Calculation=450 Date: 01/05/99 LTC: time 4:15:52p

Pigeon Point, CA CG Radio Beacon Id = 266 Dist. = 34.8 km./21.6 mi.

UTM Zone = 10 Sat. used in Position fix = 7 XYZ units = (m)eters/(f) eet

	X	Y	Z
Avg. GPS Pos.	573718.887 m	4144496.508 m	15.72 m / 51.56 f
Min. Val.	-3.418 m	-2.221 m	-5.816 m / -19.083 f
Max. Val.	2.448 m	2.064 m	5.384 m / 17.663 f

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RMSE	1.450 m	1.162 m	2.777 m
	4.756 f	3.811 f	9.110 f

## END\_RMSE

## START\_RMSE

Location/Title: Palo Alto RR Station - Palo Alto SE Base Reset

Total Positions used in Calculation=450 Date: 01/05/99 LTC: time 4:25:12p

Blunt Point, CA CG Radio Beacon Id = 268 Dist. = 50.1 km./31.1 mi.

UTM Zone = 10 Sat. used in Position fix = 8 XYZ units = (m)eters/(f) eet

	X	Y	Z
Avg. GPS Pos.	573717.124 m	4144493.325 m	20.07 m / 65.83 f
Min. Val.	-2.078 m	-2.359 m	-3.866 m / -12.684 f
Max. Val.	2.166 m	3.575 m	4.634 m / 15.203 f

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RMSE	1.093 m	1.873 m	2.389 m
	3.587 f	6.147 f	7.839 f

## END\_RMSE

## START\_RMSE

Location/Title: Palo Alto RR Station - Palo Alto SE Base Reset

Total Positions used in Calculation=900 Date: 01/05/99 LTC: time 4:43:53p

Pigeon Point, CA CG Radio Beacon Id = 266 Dist. = 34.8 km./21.6 mi.



UTM Zone = 10 Sat. used in Position fix = 7 XYZ units = (m)eters/(f)eeet

	X	Y	Z
User Pos.	573718.648 m	4144495.195 m	22.54 m / 73.95 f
Min. Val.	-3.476 m	-2.749 m	-16.540 m / -54.265 f
Max. Val.	3.281 m	4.857 m	-0.240 m / -0.787 f

RMSE	1.607 m	2.147 m	7.148 m
	5.272 f	7.044 f	23.453 f

END\_RMSE

START\_RMSE

Location/Title: Palo Alto RR Station - Palo Alto SE Base Reset

Total Positions used in Calculation=900 Date: 02/05/99 LTC: time 5:0:38a

Blunt Point, CA CG Radio Beacon Id = 268 Dist. = 50.1 km./31.1 mi.

UTM Zone = 10 Sat. used in Position fix = 6 XYZ units = (m)eters/(f)eeet

	X	Y	Z
User Pos.	573718.648 m	4144495.195 m	22.54 m / 73.95 f
Min. Val.	-4.962 m	-3.100 m	-14.040 m / -46.063 f
Max. Val.	3.566 m	6.156 m	-0.840 m / -2.756 f

RMSE	1.594 m	2.395 m	7.103 m
	5.230 f	7.857 f	23.305 f

END\_RMSE

START\_RMSE

Location/Title: Palo Alto RR Station - Palo Alto SE Base Reset

Total Positions used in Calculation=900 Date: 02/05/99 LTC: time 5:18:5a

Pigeon Point, CA CG Radio Beacon Id = 266 Dist. = 34.8 km./21.6 mi.

UTM Zone = 10 Sat. used in Position fix = 7 XYZ units = (m)eters/(f)eeet

	X	Y	Z
Avg. GPS Pos.	573718.669 m	4144495.708 m	15.25 m / 50.03 f
Min. Val.	-2.612 m	-5.478 m	-7.048 m / -23.125 f
Max. Val.	2.830 m	4.894 m	8.952 m / 29.369 f

RMSE	1.480 m	2.140 m	3.809 m
	4.855 f	7.021 f	12.496 f

END\_RMSE

START\_RMSE

Location/Title: Palo Alto RR Station - Palo Alto SE Base Reset

Total Positions used in Calculation=900 Date: 02/05/99 LTC: time 5:36:18a

Blunt Point, CA CG Radio Beacon Id = 268 Dist. = 50.1 km./31.1 mi.

UTM Zone = 10 Sat. used in Position fix = 7 XYZ units = (m)eters/(f)eeet

	X	Y	Z
Avg. GPS Pos.	573718.514 m	4144494.242 m	19.24 m / 63.11 f
Min. Val.	-3.748 m	-4.583 m	-8.436 m / -27.676 f
Max. Val.	4.210 m	3.417 m	6.364 m / 20.880 f

RMSE	1.712 m	1.900 m	3.519 m
	5.618 f	6.233 f	11.546 f

END\_RMSE

START\_RMSE

Location/Title: Palo Alto RR Station - Palo Alto SE Base Reset

Total Positions used in Calculation=1800 Date: 02/05/99 LTC: time 6:10:29a

Pigeon Point, CA CG Radio Beacon Id = 266 Dist. = 34.8 km./21.6 mi.

UTM Zone = 10 Sat. used in Position fix = 8 XYZ units = (m)eters/(f)eeet

	X	Y	Z
User Pos.	573718.648 m	4144495.195 m	22.54 m / 73.95 f
Min. Val.	-3.614 m	-2.711 m	-13.040 m / -42.782 f



Max. Val.	3.453 m	8.724 m	4.860 m / 15.945 f
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RMSE	1.508 m	2.328 m	5.383 m
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	4.948 f	7.639 f	17.660 f
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END\_RMSE

START\_RMSE

Location/Title: Palo Alto RR Station - Palo Alto SE Base Reset

Total Positions used in Calculation=1800 Date: 02/05/99 LTC: time 6:43:39a

Blunt Point, CA CG Radio Beacon Id = 268 Dist. = 50.1 km./31.1 mi.

UTM Zone = 10 Sat. used in Position fix = 7 XYZ units = (m)eters/(f) eet

	X	Y	Z
User Pos.	573718.648 m	4144495.195 m	22.54 m / 73.95 f
Min. Val.	-5.122 m	-4.759 m	-14.540 m / -47.703 f
Max. Val.	5.180 m	6.703 m	3.460 m / 11.352 f

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RMSE	2.053 m	2.605 m	5.960 m
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	6.736 f	8.545 f	19.555 f
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END\_RMSE

START\_RMSE

Location/Title: Palo Alto RR Station - Palo Alto SE Base Reset

Total Positions used in Calculation=1800 Date: 02/05/99 LTC: time 7:16:34a

Pigeon Point, CA CG Radio Beacon Id = 266 Dist. = 34.8 km./21.6 mi.

UTM Zone = 10 Sat. used in Position fix = 8 XYZ units = (m)eters/(f) eet

	X	Y	Z
Avg. GPS Pos.	573718.764 m	4144495.998 m	16.59 m / 54.44 f
Min. Val.	-6.635 m	-5.924 m	-21.494 m / -70.517 f
Max. Val.	4.402 m	9.540 m	12.106 m / 39.719 f

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RMSE	1.950 m	2.912 m	6.102 m
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	6.396 f	9.554 f	20.020 f
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END\_RMSE

START\_RMSE

Location/Title: Palo Alto RR Station - Palo Alto SE Base Reset

Total Positions used in Calculation=1800 Date: 02/05/99 LTC: time 7:49:6a

Blunt Point, CA CG Radio Beacon Id = 268 Dist. = 50.1 km./31.1 mi.

UTM Zone = 10 Sat. used in Position fix = 9 XYZ units = (m)eters/(f) eet

	X	Y	Z
Avg. GPS Pos.	573717.910 m	4144495.586 m	18.09 m / 59.34 f
Min. Val.	-3.192 m	-3.687 m	-12.788 m / -41.956 f
Max. Val.	2.854 m	4.089 m	9.612 m / 31.535 f

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RMSE	1.157 m	1.259 m	4.175 m
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	3.796 f	4.131 f	13.698 f
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END\_RMSE





## START\_RMSE

Location/Title: Palo Alto Airport - PaloPort AZ Mk HT 3704

Total Positions used in Calculation=450 Date: 06/05/99 LTC: time 11:20:37a

Pigeon Point, CA CG Radio Beacon Id = 266 Dist. = 39.0 km./24.3 mi.

UTM Zone = 10 Sat. used in Position fix = 8 XYZ units = (m)eters/(f) eet

	X	Y	Z
User Pos.	578119.034 m	4146634.366 m	2.50 m / 8.20 f
Min. Val.	-0.785 m	-1.808 m	-6.600 m / -21.654 f
Max. Val.	1.123 m	1.341 m	-1.600 m / -5.249 f

RMSE	0.478 m	0.801 m	4.801 m
	1.567 f	2.627 f	15.750 f

END\_RMSE

## START\_RMSE

Location/Title: Palo Alto Airport - Paloport AZ MK HT 3704

Total Positions used in Calculation=450 Date: 06/05/99 LTC: time 11:31:30a

Blunt Point, CA CG Radio Beacon Id = 268 Dist. = 50.4 km./31.3 mi.

UTM Zone = 10 Sat. used in Position fix = 9 XYZ units = (m)eters/(f) eet

	X	Y	Z
User Pos.	578119.034 m	4146634.366 m	2.50 m / 8.20 f
Min. Val.	-0.781 m	-1.074 m	-6.500 m / -21.325 f
Max. Val.	1.433 m	0.589 m	-1.600 m / -5.249 f

RMSE	0.563 m	0.439 m	4.252 m
	1.847 f	1.440 f	13.950 f

END\_RMSE

## START\_RMSE

Location/Title: Palo Alto Airport - PaloPort AZ MK HT 3704

Total Positions used in Calculation=450 Date: 06/05/99 LTC: time 11:41:12a

Pigeon Point, CA CG Radio Beacon Id = 266 Dist. = 39.0 km./24.3 mi.

UTM Zone = 10 Sat. used in Position fix = 9 XYZ units = (m)eters/(f) eet

	X	Y	Z
Avg. GPS Pos.	578119.382 m	4146633.977 m	-1.60 m / -5.25 f
Min. Val.	-0.836 m	-1.792 m	-2.301 m / -7.550 f
Max. Val.	0.789 m	1.357 m	2.499 m / 8.198 f

RMSE	0.447 m	0.767 m	1.077 m
	1.465 f	2.515 f	3.534 f

END\_RMSE

## START\_RMSE

Location/Title: Palo Alto Airport - PaloPort AZ MK HT 3704

Total Positions used in Calculation=450 Date: 06/05/99 LTC: time 11:50:17a

Blunt Point, CA CG Radio Beacon Id = 268 Dist. = 50.4 km./31.3 mi.

UTM Zone = 10 Sat. used in Position fix = 7 XYZ units = (m)eters/(f) eet

	X	Y	Z
Avg. GPS Pos.	578119.644 m	4146633.020 m	-1.61 m / -5.28 f
Min. Val.	-0.644 m	-0.837 m	-2.192 m / -7.191 f
Max. Val.	0.837 m	1.021 m	2.208 m / 7.245 f

RMSE	0.488 m	0.424 m	0.889 m
	1.600 f	1.392 f	2.918 f

END\_RMSE

## START\_RMSE

Location/Title: Palo Alto Airport - PaloPort AZ MK HT 3704

Total Positions used in Calculation=900 Date: 06/05/99 LTC: time 12:9:31p

Pigeon Point, CA CG Radio Beacon Id = 266 Dist. = 39.0 km./24.3 mi.

UTM Zone = 10 Sat. used in Position fix = 8 XYZ units = (m)eters/(f) eet



	X	Y	Z
User Pos.	578119.034 m	4146634.366 m	2.50 m / 8.20 f
Min. Val.	-0.481 m	-2.551 m	-7.500 m / -24.606 f
Max. Val.	1.893 m	0.974 m	-1.100 m / -3.609 f

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RMSE	0.789 m	1.279 m	4.497 m
	2.587 f	4.196 f	14.753 f

END\_RMSE

START\_RMSE

Location/Title: Palo Alto Airport - PaloPort AZ MK HT 3704

Total Positions used in Calculation=900 Date: 06/05/99 LTC: time 12:26:37p

Blunt Point, CA CG Radio Beacon Id = 268 Dist. = 50.4 km./31.3 mi.

UTM Zone = 10 Sat. used in Position fix = 8 XYZ units = (m)eters/(f)eet

	X	Y	Z
User Pos.	578119.034 m	4146634.366 m	2.50 m / 8.20 f
Min. Val.	-0.636 m	-1.996 m	-7.600 m / -24.934 f
Max. Val.	1.587 m	0.409 m	-3.300 m / -10.827 f

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RMSE	0.651 m	0.995 m	5.769 m
	2.136 f	3.266 f	18.928 f

END\_RMSE

START\_RMSE

Location/Title: Palo Alto Airport - PaloPort AZ MK HT 3704

Total Positions used in Calculation=900 Date: 06/05/99 LTC: time 12:44:9p

Pigeon Point, CA CG Radio Beacon Id = 266 Dist. = 39.0 km./24.3 mi.

UTM Zone = 10 Sat. used in Position fix = 8 XYZ units = (m)eters/(f)eet

	X	Y	Z
Avg. GPS Pos.	578119.707 m	4146634.028 m	-2.42 m / -7.93 f
Min. Val.	-2.197 m	-1.467 m	-2.684 m / -8.806 f
Max. Val.	1.793 m	1.110 m	2.116 m / 6.942 f

---

RMSE	1.046 m	0.665 m	1.182 m
	3.430 f	2.182 f	3.877 f

END\_RMSE

START\_RMSE

Location/Title: Palo Alto Airport - PaloPort AZ MK HT 3704

Total Positions used in Calculation=900 Date: 06/05/99 LTC: time 1:0:55p

Pigeon Point, CA CG Radio Beacon Id = 268 Dist. = 50.4 km./31.3 mi.

UTM Zone = 10 Sat. used in Position fix = 8 XYZ units = (m)eters/(f)eet

	X	Y	Z
Avg. GPS Pos.	578119.767 m	4146634.089 m	-1.98 m / -6.49 f
Min. Val.	-1.070 m	-1.152 m	-2.121 m / -6.959 f
Max. Val.	1.151 m	1.056 m	1.479 m / 4.852 f

---

RMSE	0.521 m	0.416 m	0.854 m
	1.711 f	1.366 f	2.800 f

END\_RMSE

START\_RMSE

Location/Title: Palo Alto Airport - PaloPort AZ MK HT 3704

Total Positions used in Calculation=1800 Date: 06/05/99 LTC: time 1:34:45p

Pigeon Point, CA CG Radio Beacon Id = 266 Dist. = 39.0 km./24.3 mi.

UTM Zone = 10 Sat. used in Position fix = 8 XYZ units = (m)eters/(f)eet

	X	Y	Z
User Pos.	578119.034 m	4146634.366 m	2.50 m / 8.20 f
Min. Val.	-0.476 m	-2.367 m	-9.900 m / -32.480 f
Max. Val.	3.054 m	1.345 m	-1.800 m / -5.906 f



RMSE	1.131 m	0.824 m	5.682 m
	3.712 f	2.704 f	18.641 f

END\_RMSE

START\_RMSE

Location/Title: Palo Alto Airport - PaloPort AZ MK HT 3704

Total Positions used in Calculation=1800 Date: 06/05/99 LTC: time 2:7:42p

Blunt Point, CA CG Radio Beacon Id = 268 Dist. = 50.4 km./31.3 mi.

UTM Zone = 10 Sat. used in Position fix = 7 XYZ units = (m)eters/(f)eet

	X	Y	Z
User Pos.	578119.034 m	4146634.366 m	2.50 m / 8.20 f
Min. Val.	0.101 m	-2.905 m	-8.200 m / -26.903 f
Max. Val.	2.472 m	1.352 m	-2.200 m / -7.218 f

RMSE	1.482 m	0.846 m	5.213 m
	4.861 f	2.776 f	17.103 f

END\_RMSE

START\_RMSE

Location/Title: Palo Alto Airport - PaloPort AZ MK HT 3704

Total Positions used in Calculation=1800 Date: 06/05/99 LTC: time 2:40:54p

Pigeon Point, CA CG Radio Beacon Id = 266 Dist. = 39.0 km./24.3 mi.

UTM Zone = 10 Sat. used in Position fix = 7 XYZ units = (m)eters/(f)eet

	X	Y	Z
Avg. GPS Pos.	578118.635 m	4146634.942 m	-3.55 m / -11.66 f
Min. Val.	-2.474 m	-3.111 m	-4.746 m / -15.570 f
Max. Val.	2.439 m	2.588 m	4.154 m / 13.629 f

RMSE	1.029 m	1.182 m	1.761 m
	3.375 f	3.879 f	5.779 f

END\_RMSE

START\_RMSE

Location/Title: Palo Alto Airport - PaloPort AZ MK HT 3704

Total Positions used in Calculation=1800 Date: 06/05/99 LTC: time 3:13:27p

Blunt Point, CA CG Radio Beacon Id = 268 Dist. = 50.4 km./31.3 mi.

UTM Zone = 10 Sat. used in Position fix = 9 XYZ units = (m)eters/(f)eet

	X	Y	Z
Avg. GPS Pos.	578119.057 m	4146634.794 m	-1.48 m / -4.85 f
Min. Val.	-3.341 m	-1.505 m	-5.422 m / -17.789 f
Max. Val.	1.710 m	2.720 m	4.078 m / 13.379 f

RMSE	1.118 m	1.022 m	2.156 m
	3.669 f	3.353 f	7.073 f

END\_RMSE











